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ORIGINAL LECTURES.

MALARIAL REMITTENT FEVER.

A Clinical Lecture, delivered at the Charity Hospital, New Orleans.

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(Reported by J. H. BEMISS, M.D.)

GENTLEMEN: I ask your attention to-day to a case of continued malarial or remittent fever, whose clinical course and treatment you have recently had opportunity to observe. It is scarcely necessary to remind you how important a thorough acquaintance with this form of malarial fever is to its satisfactory treatment. Its specific cause is identical with that of the other malarial fevers. This is sufficiently proved by its occurrence at the same periods of the year, and in the same localities with other forms of malarial fever, and its convertibility with those other forms.

Its nosological classification is better expressed by the adjective "*remittent*" than by "*continued*," but if you carefully examine the charts of temperature which are being passed around, you will observe the striking parallelism between them and the temperature charts of typhoid fever so lately exhibited to you. You perceive, also, that while the charts show marked remissions, there is no decline of temperature to the normal standard until in the course of convalescence the remittent form of fever lapsed into the intermittent type.

Mr. W. H. Thompson will read the clinical notes, which have been carefully recorded by Mr. P. Michinard, Resident Student, and himself.

J. G., laborer, native of Germany, twenty-five years of age, was admitted to Ward 19, Bed 251, on the 17th of November, 1882. Arrived in the city on the day of his admission from some point on the Mississippi River above New Orleans. Gives a history of attack by a chill several days before admission, which was followed by fever which had not entirely left him, although he had a chilly sensation occurring every day. Temperature on admission 102.3°; pulse not counted, but rapid and somewhat dicrotic; tongue large, coated, and moist; spleen and liver not much enlarged, but there was tenderness on pressure over both; no tympanitis, or gurgling, and but little complaint upon pressure over abdomen; bowels constipated; urine non-albuminous.

Patient got five grains each of calomel and sodium bicarbonate; followed by two stools. After catharsis, he received ʒij liquor cinchonidiæ every third hour.

Nov. 21.—Temperature 103°; pulse 100; tongue, coated; complexion sallow, with flushed cheeks and injected eyes. Calomel and soda were repeated by the House Surgeon, followed by slight purgation, after which liquor cinchonidiæ was again exhibited as at first.

22d.—Temperature 101°; pulse 80. In the evening, temperature 102°.4; pulse 90.

23d.—Morning, temperature 101°.2; pulse 75. Evening, temperature 103°.4; pulse 84.

24th.—Morning, temperature 101°.4; pulse 80. Evening, temperature 103°; pulse 80. Liquor cinchonidiæ stopped; no stools since 21st; two Seidlitz powders produced one stool.

25th.—Morning, temperature 101°; pulse 80. Ordered surface sponged frequently with tepid water; diet of oatmeal and milk with iced barley water flavored with lemon peel for drink.

26th.—Morning, temperature 101.2°. Evening, temperature 103°; tongue coated; face flushed; complains of headache and abdominal pain. In the afternoon got a third dose of calomel and soda, each grs. vij.

27th.—Morning, temperature 101°. A very small stool followed the calomel. Liquor cinchonidiæ renewed and an amount representing thirty grains of the salt was given on the 27th, 28th, and 29th.

28th.—Morning, temperature 100°. Evening, temperature 103°.

29th.—Morning, temperature 101.5°. Evening, temperature 103°.

30th.—Temperature 102.5°. Cinchonidia solution stopped and ten drops of dilute sulphuric acid given thrice daily in ʒij compound tincture of cinchona. Patient thirsty, weak, and restless; no stool since 27th. Ordered beef essence, oyster soup, milk punch, thrice daily; for a drink, lemonade with bitartrate of potassium.

Dec. 1.—Morning, temperature 100.2°. Evening, temperature 103°. Patient restless and complaining of his costiveness; was allowed to take a Seidlitz powder, which produced two stools.

2d.—Morning, temperature 101°. Evening, temperature 102°.6; pulse 100°, weaker and somewhat dicrotic. Liquor cinchonidiæ in ʒij doses thrice daily substituted for tinct. cinchon. comp. and acid. Sustaining diet and stimulants.

3d.—Morning, temp. 101°. Evening, 102.8°.

From the 3d to the 6th, too little change in patient's condition to be worthy of note. He had no stool from the 2d to the 7th, when a stimulating enema produced the desired effect.

8th.—The first decided tendency to cure by conversion into the intermittent type exhibited itself. The temperature on this day was, morning, 99.6°; evening, 100.6°.

9th.—Morning, 98 6°; evening, 101°.

10th.—Morning, 98°; skin bathed in perspiration; evening, 100°.

On the 13th treatment was limited to dietetic and hygienic measures. On the 15th, slight rise of temperature was met by a recourse to quinine.

Chloral hydrate and bromide of potassium were occasionally administered, to induce sleep.

The first question you desire to hear discussed is, What is remittent fever, in point of pathology? In other words, what constitutes the difference in the morbid process of remittent fever as compared with the morbid process of the intermittent form, both being produced by the same toxic agent?

Now, in endeavoring to answer this question so as to instruct you properly, I think I may safely postulate the following proposition:

The typical form of malarial fever is the intermittent.

Let us understand one another on this point. Nature works by modes, whether in health or disease. We denominate these modes *laws*. The law of malarial fever is that the intermittent form shall be so predominant in numerical ratio, that the remittent cases should be looked upon as the exceptions, that is, the departures from type. I have in a previous lecture discussed the question of the relative frequency of quotidian and tertian cases.

If we admit this proposition, it is perfectly apposite to enter into an investigation of the causes which determine the departures from type.

I do not hesitate to ask you to adopt the succeeding propositions as being those which, in my opinion, most nearly explain the causes of remittent cases.

First.—Increased intensity of malarial intoxication, either from, *a*, the unusual quantity of poison received; *b*, more than usual toxic qualities of the poison; *c*, unusual susceptibility of individuals to the poison.

There can scarcely be a question in regard to the influence of the first and third of these minor propositions in determining graver attacks of malarial fever. I must say, however, that as it respects any knowledge we possess of altered qualities of the malarial poison, we are now, and in all probability will long continue to be, at fault. We can only assume that, like other organisms (and it appears to be such), one generation or crop is likely to differ in its constituent qualities from other generations or crops.

It is undoubtedly to one or the other of these causes we must attribute the fact that cases of remittent fever are relatively more numerous in certain malarial localities, especially those situated in the tropics, where frosts do not occur to interrupt its continued evolution.

Second.—Another cause of remittent attacks is the concurrence of inflammations. If any form of acute inflammation complicates a case of intermittent fever, the febrile movement at once assumes a continuous type, for that fever which accompanies inflammations persists as long as the exciting cause is active.

Third.—Intermittent attacks may become continued in type from accumulations of secondary poisons in the blood. It is not improbable that this may be reckoned as a very common cause of the conversion of intermittent into remittent.

Fourth.—The natural history of intermittent attacks shows a marked and almost constant tendency to an increase in violence with each recurrence of the paroxysms. This aggravation is likely, not only to increase the degrees of temperature records, but also to shorten the period of intermission until the fever becomes persistent.

It appears to me that this mode of study ought to be of much practical value in directing your attention to those variations in the ordinary morbid processes of the malarial poison, which can in many cases be anticipated and prevented; and in other cases met by such appropriate treatment that restoration of the intermittent type shall simplify those cases which may not be summarily curable. When I first entered upon the practice of medicine, I am sure that I occasionally had some dozen cases or more, of these remittent attacks under treatment at one time. I now believe that they were principally due to a failure to cure intermittent forms, because of neglect or improper medication during the earlier periods of attacks. I generally found that attempts at cure had been made by non-professional persons. The main feature, if not the sole feature, of their practice, consisted in repeated purgation. The purgative which stocked every family chest was "Cook's Pills," consisting of one grain each of calomel, rhubarb, and aloes. It was customary to give from four to six of them at one dose, to be repeated once or twice daily, until the fever declined to that point which was supposed to render the preparations of cinchona admissible. It was then not only the popular idea that cinchona should not be given during fever, but it was one held by nearly all practitioners of medicine. But I have somewhat unintentionally gone into this digression.

I need not occupy much of your time in portraying the symptoms of this form of fever. You notice this patient had scarcely any symptoms common to typhoid fever. His bowels were costive—scarcely at all tender, or tympanitic; no ileo-cæcal gurgling or soreness; no marked nervous ataxia or delirium, and certainly no rose spots. This is not always the case. Indeed, I may safely say that it is so much the rule for bowel irritations to complicate remittent fever, that the physician should be upon his guard in his repetition of cathartics. I have seen patients die by exhaustion from excessive diarrhœa. I have also seen deaths occur from entero-peritonitis, and again have seen more than one death from intestinal hemorrhage when typhoid fever could be positively excluded. Notwithstanding these facts, we must not, from any analogy of symptoms in certain cases of remittent fever with those of typhoid fever, allow ourselves to be led into those common errors of diagnosis which classify them as examples of the latter disease.

It is proper enough to say that your remittent cases have assumed a typhoid condition, but to say they have "run into typhoid fever," as is too frequently done, is very wrong. It is a wrong to medical science, and a wrong and reproach to sanitary science, which demands that confusion in regard to the presence of communicable diseases, shall be carefully avoided.

Let me now lay before you the methods of treatment which my long and large experience has taught me to consider the best which can be adopted.

When called for the first time to a case of continued malarial fever, the leading indication should be to secure cinchonism. This should be attempted in any stage of the disease or condition of the patient. You must not trust to small doses of quinine, but employ it in sufficient quantity to fully test its therapeutic value.

If the departure from type is due to either of the causes stated under the first proposition, cinchonism may at once prove curative. I have seen excessive temperature abated, the dry skin become bathed in healthful perspiration; the tongue grow moist; the delirium cease, and the patient enter at once upon convalescence after a single saturation with quinine. If inflammations are present, you should not expect quinine to arrest them. But they are not in any manner prejudiced by its use; on the contrary, the antipyretic effect of this drug must exert a greater or less salutary influence over local inflammations.

If the departure from type is due to secondary blood impurities, the expectations of directly curative effects of quinine are also lessened, but by a judicious combination with some eliminant, we may meet the double indication of depuration and cinchonism.

The case now before you is probably classified with those which owe their departure from type to secondary blood impurities. The costive bowels, sallow and almost jaundiced skin, the fevered tongue and loaded urine, all indicate that this conclusion is correct.

You will observe that, in this instance, calomel and soda were administered, and their cathartic effect was waited for before prescribing the antiperiodic. It is only in rare instances that I delay the exhibition of quinine to await the action of preparatory medicine. This patient presented symptoms exceptionally favoring such a course of medication. The indications for depurative remedies appeared to be paramount. No injury seemed likely to ensue from a delay of cinchonism, as no excessive fever or other threatening symptoms were present. Each separate case calls for the exercise of good judgment, and a variation of treatment to suit the exigencies present.

In the great majority of cases which I have observed, I have thought it necessary to combine antiperiodic and eliminant treatment. Quinine may be given combined with blue mass, in the proportion of five or ten grains of the latter to every scruple of the former; or competent doses of calomel may be alter-

nated with the doses of quinine. The only precaution you need observe is in not exciting so much intestinal peristalsis as to carry your quinine out of the system before it has been appropriated. I had at one time a medical practitioner living neighbor to me, who treated his malarial cases with a mixture of sulphate of magnesium, quinine, and tartrate of antimony. You can scarcely imagine the unpleasant complications this treatment occasioned.

If the bowels are already inclined to be irritable, do not hesitate to combine enough opium with your cathartic to prevent too much energy or quickness of operation.

In quite a considerable proportion of the cases I treat, sufficient elimination is produced by bitartrate of potash given in ʒij doses to an ordinary tumblerful of lemonade; the patient being instructed to drink small quantities as often as thirst prompts a call for fluids.

In a ratio of grave cases differing in different years of epidemic prevalence of malarial affections, prompt cure will follow the treatment I have indicated. In another ratio no good results will be seen.

You observe in this patient's case the temperature continued to rise for three days, although ninety grains of sulphate of cinchonidia had been administered, preceded by calomel and soda. Whenever this failure occurs I advise you not to continue the quinine, increasing the doses in amount and frequency, as is often done, but stop it altogether. Persistence in its use under such circumstances is likely to produce aggravated physiological effects, and as the hindrance which prevented its curative action at first, is probable still to exist, it is better to await conditions of the system more favorable to its repetition. My rule is to place the patient under symptomatic treatment. As the fever is generally the most formidable symptom, we must carefully mark its course. The temperature should be recorded every six hours. Any intelligent person can be instructed to take observations in your absence.

The patient should be frequently supplied with cool drinks, rendered palatable by the addition of lemon, or of some of those home-made beverages which are known under the name of "shrub," such as raspberry, currant, the juice of the pineapple, or watermelon. Neutral mixture with small doses of digitalis and acetate of morphia may be given every third or fourth hour. The surface should be sponged often either with cold or tepid water. The hair should be cut; the bedding changed often, and the room kept cool and well ventilated. The diet should be of farinaceous articles, fruits, and milk, unless some ataxic symptoms call for meat extracts and stimulants. Insomnia should be carefully watched for, and relieved by chloral hydrate or opium.

Under this expectant treatment it is rare, indeed, that the oscillations of temperature do not, in the course of a very few days, become more marked, the change being most observable in the descent of the lower angles of the curves. As soon as this occurs, tentative doses of quinine should be resorted to. It is better to give it in solution, and in quite positive quantities. If you catch the patient when his temperature is at a decidedly lower range, give five to twenty grains of the salt at one time. After this watch its effects with sedulous care. If the oscillations of temperature are overcome by the quinine, everything will be well. If, on the contrary, they are not governed by it, resume your expectant medication, and await another opportunity to invoke the aid of antiperiodics.

Gentlemen, I have travelled this difficult road so often that I may venture to speak with some authority. But at the same time, I cannot close this lecture without reminding you, that in treating continued malarial attacks, while your own good sense must be the most important factor of success, there is an old Latin phrase which may give you important aid in its exercise, "*in medio tutissimus ibis*"—the middle and careful course is the safest.

ORIGINAL ARTICLES.

THE MICROCOCCUS OF GONORRHŒAL PUS.

SECOND PAPER.

BY GEORGE M. STERNBERG, M.D.,
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IN my paper published in the THE MEDICAL NEWS of January 20th and 27th, I give in detail the experiments which have led me to the conclusion that the infective virulence of gonorrhœal pus is not due to the presence of the micrococcus which is found in a certain proportion of the pus-cells, and which, so far as my observations go, is constantly present in the pus of *specific urethritis*. If I am right in my deduction that this micrococcus is an accidental parasite which has nothing to do with the special virulence of gonorrhœal pus, it is altogether probable that the same micro-organism will be found in the pus of *non-specific* urethritis. As this is extremely rare, I am not likely to have the opportunity of verifying the truth of this prediction, but mention the matter here in the hope that some practitioner who may have an undoubted case of this nature will look for the "*gonococcus*" of Neisser (MEDICAL NEWS, January 27th, p. 99) by the method which I have described (*loc. cit.*, p. 96). Evidence of this kind will, however, always be subject to the suspicion of a mistake in diagnosis, and the only satisfactory way of verifying the truth of the prediction would be to produce a urethritis, experimentally, by the application of some irritating chemical agent to the mucous membrane of the urethra. But if persons were found ready to place their urethræ at the disposal of science for this purpose, it would be necessary to guard against the criticism made by the reviewer quoted (*loc. cit.*) with reference to the experiment of Bokar upon six medical students, viz., that "the experiment would have been far more convincing if the dauntless three had been kept in solitary confinement for a week before or after the inoculation."

The most ardent devotee of science would hardly submit to this condition unless the question to be determined were one of paramount importance.

It is difficult to decide how much weight to give to the experiment of Bokar in the absence of detailed information with reference to the method of cultivation employed, especially as he is not known in this country as an expert in culture-experiments of this kind. The writer will therefore make no attempt to estimate the scientific value of the result reported, but if opportunity offers will repeat his own experiments, and will be quite ready to admit that the micrococcus present in gonorrhœal pus *is* the cause of infective virulence if he is able even occasionally to produce gonorrhœa by the introduction of a pure culture of this micrococcus into the urethræ of healthy persons.

The object of the present paper is to call attention to a later claim which has been made in support of the hypothesis of Neisser, with reference to the etiological *rôle* of this micrococcus, based upon evidence of a different kind.

In the *Medical Record*, of December 16, 1882, I find the following (p. 687):

"Dr. Leistikow thinks he has confirmed, by a series of experiments, the discovery made by Neisser, of the presence of a special form of bacteria in gonorrhœal discharges. In the first stage of a gonorrhœa, when the discharge is thick and abundant, but few of the bacteria can be seen. They exist, however, in great numbers in the thin and scanty secretion of the later stages, sometimes even when the disease has existed over a year. In the treatment of gonorrhœa the author employs an injection of corrosive sublimate, which Koch has found most fatal to the various forms of bacteria. He uses a solution of 1 part to 20,000, 1 in 10,000 being found to be too irritating. In private practice a still weaker solution of 1 part to 30,000 is employed. The injections are made three times a day, and should be continued for three or four days after all discharge has ceased. The bacteria disappear, or are greatly diminished in number, after one day's use of the injections, but return again if the latter are discontinued too soon. Treatment by injections should not be begun until after the acute inflammation has subsided.—*Deutsche Medicinal-Zeitung*, Sept. 7, 1882."

This may appear, at the first glance, to be pretty strong evidence in support of the view that infective virulence is due to the presence of this micro-organism; but, as I shall show, the evidence given is in reality rather in favor of the deduction to which my own experiments have led me.

We are first informed that Dr. Leistikow thinks he has confirmed the discovery made by Neisser, of the presence of a "*special form* of bacteria in gonorrhœal discharges." But I have already shown (*loc. cit.*) that this micrococcus is identical morphologically with that found in urine undergoing alkaline decomposition; and since my paper was written, I have had under observation a micrococcus from quite a different source, which also cannot be distinguished by the highest powers from that found in gonorrhœal pus. A pure culture of the micrococcus referred to was obtained by inoculating a culture-fluid with pus from a deep-seated abscess—whitlow—at the moment of its escape from a deep incision. The micrococcus from this source, cultivated side by side with that from gonorrhœal pus, was under daily observation for weeks, and, as already stated, no morphological differences could be detected.

The claim, then, that the "*gonococcus*" of Neisser is "a special form of bacteria" cannot be sustained.

We are further informed that

"in the first stage of gonorrhœa, when the discharge is thick and abundant, but few of the bacteria can be seen. They exist, however, in the thin and scanty secretion of the later stages, sometimes even when the disease has existed over a year."

This corresponds with my own observations, but does not support the view that these micro-organisms are the cause of the "thick and abundant discharge" of acute gonorrhœa, in which they are "but few." The evidence offered in support of Neisser's hypothesis as to the etiological *rôle* of this micrococcus is, however, of another kind, and depends upon therapeutical experiments in which a solution of corrosive sublimate was used locally in the treatment of gonorrhœa. According to the observations of Leistikow, "the bacteria disappear, or are greatly diminished in number, after one day's use of the injections, but return again if the latter are discontinued too soon."

I have made numerous experiments relating to the germicide power of mercuric bichloride upon this micrococcus, and am able to say very positively that this reagent does destroy its vitality in the proportion used.[1] I am, therefore, quite prepared to believe that "the bacteria disappear, or are greatly diminished in number." But is the gonorrhœa cured?

If it is true that the urethral inflammation and gonorrhœal discharge are due to the presence of this micrococcus, the injections of corrosive sublimate should have a specific curative effect, as this reagent is fatal to the micrococcus in the proportion of one part to 20,000. But we are told that the injections should not be begun until after the acute inflammation has subsided, and no claim is made that the course of the disease is aborted by the use of these injections, which are "to be used three times a day and continued for three or four days after all discharge has ceased."

It will be admitted that evidence of this kind does not give very strong support to the hypothesis of Neisser, especially in view of the fact that gonorrhœa may also be cured by frequent injections of a weak solution of zinc sulphate (one grain to the ounce of water), whereas, this salt has no germicide power whatever, even in very much stronger solutions.

Thus I have recently demonstrated by experiment, that this very micrococcus of gonorrhœal pus retains its vitality and multiplies freely in a suitable culture-solution after exposure for two hours to the action of a twenty per cent. solution of the salt in question. The undoubted value of this remedy, therefore, as an injection in gonorrhœa must be due to some other cause than germicide power.

Before closing, I beg leave to call attention to the fact that some of the wood-cuts illustrating my previous paper (MEDICAL NEWS, January 27th) are not very satisfactory, for the reason that the engraver has given the micro-organisms represented very irregular forms and indefinite outlines. Fig. 6, especially, falls far short of fairly representing the group of micrococci multiplying in two directions, which are seen in the photo-micrograph from which this figure was copied.

Unfortunately, also, several mistakes have occurred in the references to these figures.[2]

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[1] *Vide* paper to be published in the April number of the *Am. Journal of the Medical Sciences.*

[2] Page 97, second column, thirteenth line, for 5 *read* 6; same column, third line from bottom, for 4 *read* 5; same column, fifth line from bottom, for 3 *read* 4.

NOTES ON THE MANAGEMENT OF RINGWORM OF THE SCALP (TINEA TONSURANS).

BY ARTHUR VAN HARLINGEN, M.D.,
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(*Concluded from page 298.*)

RINGWORM of the body is very apt to go along with ringworm of the scalp, and in examining a patient for the first time the body should be carefully looked over as well as the head. Also the surface of the body should be searched with care from time to time while the patient is under treatment, because scales and stumps of diseased hairs are always apt to be parting from the scalp, falling within the collar and dropping upon the neck, where, if they light upon suitable soil, they may sprout and grow and spread.

There is a good deal of difference in individuals as to the aptitude for catching ringworm. One may be in the midst of floating spores in the air of a school-room or public institutions where the disease is rife, without coming to harm from it, while another seems to offer the conditions needed for the growth of the fungus, which is continually springing up on some new part of the skin at the same time that, under treatment, it is being stamped out in another. In my experience, children with light, thin hair are more apt to show this susceptibility, while dark-haired children seem as a rule less prone to contract ringworm of the scalp, and are more easily rid of it when it happens to attack them. Weakly and scrofulous children are also much more prone to contract ringworm of the scalp in a stubborn form, and this lends an indication for internal treatment which experience shows to be useful. I refer to the employment of cod-liver oil, which is often brought into use with advantage in the treatment of chronic and inveterate ringworm of the scalp. A course of oil seems often to aid the external treatment to a marked degree. Arsenic I do not think is so useful; at least it has not proved of much benefit in my hands, though others speak of its advantages.

Although I do not intend in this article to go over the rather hackneyed subject of remedies for ringworm of the scalp, yet as a part of the management, I shall now mention some of the applications which have proved most beneficial in my experience.

Prominent among these is carbolic acid, which I use not only to destroy the parasite in the diseased patches, but also to act as a preventive in checking the spread of the fungus to healthy parts. For this purpose I use a mixture of one part of carbolic acid with three to six parts of glycerine. This is rubbed into the whole scalp, or into the entire scalp saving the affected patches, every day, and not only tends to put an end to the life of the fungus, but also prevents its spread from the patient to other persons. A carefully cleansed scalp becomes covered with fine epidermic scales as soon as it is dry, and these branny scales containing fungus are brushed off and float about in the atmosphere, a constant menace to persons in the neighborhood, to whom they may carry the contagion. For this reason a child suffering from ringworm of the scalp should not only wear a linen cap constantly, but should have the scalp constantly saturated with carbolized glycerine.

A stronger carbolized glycerine (one part to two or three) may be applied to the patches directly by means of the swab I have described above, or with a bit of flannel on the end of the finger. Glycerine has a good deal of penetrative power and it gets down to the roots of the hair very nicely, carrying the carbolic acid with it. I sometimes succeed in curing quite severe cases of ringworm of the scalp by means of carbolic acid alone, using the stronger solution to the diseased patches, and the weaker preventive fluid elsewhere over the entire scalp.

Occasionally I make use of a blistering fluid, especially when the disease is recent and tolerably extensive but superficial, and where the fungus has only penetrated the follicles a short distance. I have the cantharidal collodion made somewhat stronger than that usually sold, and paint several coats over the diseased patches on the freshly shaven scalp. I do not think it safe to paint too large a surface at one time, and therefore usually do not exceed three or four square inches at any one sitting. It will be found that in pulling off the crust after the blister has collapsed and dried, quite a large number of diseased stumps will come away, the roof of the dried blister serving to depilate to a certain extent. The milder carbolic wash may usually be applied immediately after the blister has been removed.

Another application which I use in more inveterate cases of ringworm of the scalp is the oleate of mercury. This is used in six per cent. strength, and is mixed with acetic ether in the proportion of seven parts of the oleate to one part of ether. It has remarkable penetrative power, and gets down to the very roots of the hairs more quickly than any other application with which I am acquainted.

There are many other parasiticides in use. Some of these are very effective, and, in any case where one thoroughly used fails, another can be used. The following may be named as most likely to prove useful in the majority of cases. Thymol, boracic acid, picrotoxin, iodine alone, or in combination with tar or sulphur, mercurial preparations, and chrysarobin. As the text-books teem with formulæ for the employment of these remedies, I will not describe the method of their use.

The proper management of a case of ringworm involves of course the prevention of its spread, and this presents, in some cases, a problem difficult of solution. It is better that children who have ringworm of the scalp should be completely isolated from their fellows. This, it must be remembered, does not mean anything like solitary confinement. Owing to the fact that tinea tonsurans does not attack adults, a child suffering with this disease may mingle freely with older persons without any danger to the latter, beyond the possibility of contracting ringworm of the body, which, as is known, is very readily cured. Where complete isolation is impossible, the usual precautions are of course to be taken.

The promiscuous use of brushes, combs, towels, hats, etc., is to be guarded against. In addition, the patient should sleep in a separate bed, and, if possible, in a separate chamber. But the best means of isolation is to prevent the diffusion of the spores from the patient's scalp, and this may be attained by keeping it constantly saturated with the weaker preparations of carbolized glycerine above mentioned. The spores are thus kept from flying about in the air, as they will certainly do if the diseased scalp is allowed to become dry and scaly. The same application may be made to the scalps of other children who for any cause may be obliged to associate with the patient. In these the hair should be kept short, the scalp washed every day thoroughly, and an application of carbolized glycerine (one part to ten), made immediately afterwards. The patient should constantly wear a linen cap over the scalp, and the greatest care must be taken to disinfect, by dry heat, the various articles of clothing which cannot be boiled, or which it would be inconvenient to throw away.

The coat-collar is a very frequent nidus for the propagation of the ringworm fungus, because it is apt to rub against the scalp, and any stray scales dropping from the head are likely to light there. It should therefore be one of the points to be watched, and indeed if of cloth should be temporarily covered with some linen or cotton fabric which can be washed.

It should be remembered that ringworm in children not unfrequently originates from contact with domestic animals, particularly cats and dogs. In the management of such cases this cause of contagion should not be overlooked. Two little boys recently came under my care suffering from ringworm of the scalp, the cause of which remained a mystery until I ascertained that they were accustomed to pass hours of each day in a small hut which they had built in play, and where they lay for hours together each day in a bunk with a pet dog. The animal on examination proved to have "mange," in other words, ringworm.

It may be thought that in the foregoing remarks on the management of ringworm of the scalp I have gone too much into what appears to be trivial detail, but I am convinced that this is necessary, inasmuch as we constantly see failure to cure cases of ringworm where suitable and efficient remedies have indeed been prescribed, but where sufficient care has not been taken to have them properly applied.

The affection is a stubborn one, four to six months at least are required to effect a cure. In well-marked cases the friends and parents of patients should be told this beforehand to prevent misapprehension; a more favorable prognosis is almost sure to lead to disappointment. Where an apparent cure has been reached, the patient should still remain under the oversight of the physician for some months, and a very careful search should be made from time to time with a view to discover the presence of scurfy patches with broken-off hairs or the black dots marking diseased stumps.

A spontaneous cure sometimes occurs after the lapse of years, as the patient reaches adult life. The disease is rarely encountered in persons over twenty-one years of age.

CASE OF SUDDEN DEAFNESS FROM MUMPS.

BY GEORGE C. HARLAN, M.D.

THOUGH mumps has been frequently referred to as one of the causes of deafness, it is only recently that the clinical histories of a few such cases have been reported by Buck, Knapp, Moos, and Brunner. They may be found in the numbers of the *Archives of Otology* for 1882. In many text-books the subject is not even mentioned, and Brunner says that "Our experience on this subject is very small, and we have not been able to describe the exact clinical picture even, apart from the obscurity in which the pathologico-anatomical conditions seem to be involved." Knapp, also, observes that, "The clinical material for a comprehensive description of the affection, and for a discussion of its nosology, is still so scant as to encourage the publication of new observations." Thus encouraged, I have thought it worth while to report the following case, even if only to call attention more generally to the subject.

M. P., female, aged 23, states that three years ago she had mumps, and the day after the commencement of the attack there was a roaring sound in the right ear, and complete deafness on that side. There was no discharge, and no pain. For more than a month she was so dizzy that she could not walk in the street alone; there was an irresistible tendency to pitch forward, but she does not remember that the movement was more toward one side than the other. When in bed, she felt as if everything in the room were in motion, "like when you first come off a ship." There is still constant tinnitus, and the watch is not heard on contact; there is faint perception of the tuning-fork held on the mastoid, increased by closing the meatus; and it is also heard slightly for a few seconds when held close to the ear without contact. The external ear and membrana tympani are perfectly normal.

Toynbee wrote, long ago, that, "In these cases the nervous apparatus is evidently affected, as the deafness comes on suddenly, is usually complete, and, as a general rule, no appearance of disease can be detected in the meatus, membrana tympani, or tympanic cavity," and no one not determined to ignore the labyrinth entirely in aural pathology could, with the histories of the cases recently reported before him, locate the lesion in any other part of the ear. As there was no indication of cerebral complication in any of the cases reported, it may, perhaps, be conceded that the labyrinth is the seat of the disease. What is the nature of the disease, why it attacks the labyrinth, and how it gets there are, in the absence of post-mortem observations, still subjects of conjecture. The suddenness and completeness of the deafness point to rapid and copious serous effusion, and by most of those who have discussed the affection it is considered to be a metastatic one, similar to the well-known orchitis. Such an exudation might easily destroy

the function of the delicate tissues in the labyrinth, and the subsequent disappearance of the vertigo may be attributed to the absorption of the fluid.

An interesting point in the case just reported is that a very slight, but certain, degree of hearing remained. Brunner says that the deafness is complete, and, according to past experience, is incurable; but Toynbee admits that the nerve is not necessarily wholly paralyzed, and that a very slight degree of hearing may remain. Knapp suggests that all metastatic affections of the ear need not necessarily result in total deafness, and that the affection may not be so rare as has been supposed, as many mild cases may have escaped detection. It is even quite possible that a decided degree of deafness, in one ear only, might fail to attract attention during the course of a painful disease, and hearing be subsequently restored.

HOSPITAL NOTES.

BOSTON CITY HOSPITAL.

Service of DR. W. H. THORNDIKE.

ABSCESS OF THE TIBIA TREPHINED.

(Reported by ROYAL WHITMAN, M.D., House Surgeon.)

THE patient, a man, twenty-nine years of age, entered the hospital October 9, 1882, with the following history: In 1874, without apparent cause, he commenced to have acute pain in the upper part of the right tibia; this was accompanied by more or less swelling and redness in the surrounding tissues. These symptoms passed away in about two weeks, though a certain amount of enlargement in the bone has persisted. He remained perfectly well until 1879, when he had a secondary attack. Since then he thinks that the bone has slowly enlarged, though he has had no pain or other symptoms until about eight weeks before his entrance to the hospital, when he again had sharp pains in the head of the tibia. These pains, which were deep-seated and boring in character, were worse at night, shooting up and down the leg. Since then he has gradually lost appetite, flesh, and strength, and has occasional night-sweats.

Examination shows the tissues over the head of the tibia to be tender, red, and slightly œdematous. About two inches below the tubercle is a point of localized tenderness. The head of the tibia is about one inch larger in circumference than that of the corresponding bone.

On October 9th Dr. Thorndike made a crucial incision over the point of greatest tenderness. The periosteum was found to be thickened and inflamed. This was retracted from the surface of the bone. The trephine (three-fourths of an inch in diameter) was then applied, and at a depth of three-fourths of an inch from the surface pus was reached, and about one-half an ounce was evacuated. The cavity of the abscess was then thoroughly cleaned with carbolic solution. The operation was done under spray, and the wound was dressed with carbolized gauze. After the operation the pain was almost completely relieved. The patient rapidly gained flesh and strength, and was discharged from the hospital in three weeks, with but a small opening from which a small amount of pus was discharging. He is now almost entirely well.

MEDICAL PROGRESS.

RELATION OF TUBERCLE BACILLUS TO PHTHISIS.—DR. C. THEODORE WILLIAMS publishes the results of the examinations which have been carried on in the Brompton Hospital for some months with a view to test Koch's conclusions. The number of patients whose sputum has been tried is one hundred and thirty. The method used was that of Dr. Heneage Gibbes, the staining being accomplished by his magenta aniline solution and chrysoidin; in some later slides methylene blue was substituted for the chrysoidin. The specimens tested were either taken from the sputum collected during the twenty-four hours or from that expectorated in the early morning, and the rule adopted has been in the case of a negative result to repeat the examinations two, three, or four times, so as to insure accuracy. Twenty-one patients were examples of various lung affections other than phthisis. In no one of these did the sputum contain bacilli. The one hundred and nine phthisical cases consisted of acute and chronic forms, and included instances of tuberculo-pneumonic phthisis, of scrofulous pneumonia, of fibroid, catarrhal phthisis, and a large number of cases of chronic tubercular phthisis. Cavities were detected in one or both lungs in eighty-one of these patients, nine were in the stage of early consolidation, the rest were undergoing softening, or were cases of old tubercular induration with emphysema or fibrosis. In the one hundred and nine phthisical cases he detected bacilli in one hundred and six, and even of these three, in one it could not be affirmed with certainty that they were absent.

So far his results agree with those of previous observers as regards the specific character of the bacilli, and the fact that none were found in the cases of bronchiectasis, in which the expectoration was extremely fetid and abundant, separates the tubercle bacillus from any of the numerous organisms connected with fermentation and decomposition.

Most of the consumptive patients had cavities, but nine were cases of early consolidation. These were all cases in which both the history and the physical signs forbade any suspicion of a cavity, and he offers them as a proof that the bacilli are found in connection with tubercle formation, and not only with softening and excavation.

Temperature observations were carefully taken in all the one hundred and nine cases, and in fifty-one pyrexia, ranging from 100° to 105° F., was present at the time of the examinations. In some of these pyrexial cases the bacilli were very abundant, but in others, though the sputum was abundant, bacilli were few, this in spite of numerous careful observations.

With regard to the proportion present during periods of quiescence or arrest of the disease, he should regard their total disappearance as an eminently favorable sign. Out of four cases of contracting cavities where very favorable changes were progressing, bacilli were detected in three, but in small numbers; in the fourth case, above mentioned, none were found. Therefore, we are hardly justified in concluding that there is any definite ratio between activity of disease and number of bacilli, though as a rule they are few in cases where the disease is quiescent.

He has suspended glass plates covered with glycerine in the extracting flues of the Brompton Hospital, and thus subjected them to a stream of air with a velocity of three hundred or four hundred feet a minute issuing from numerous wards containing consumptive patients. In this way he sought to obtain a concentration of the exhalations, and on testing the plates they were found to contain abundant bacilli.

While, however, the bacillus must be duly considered

in the origin of phthisis, it may be regarded as a more or less exciting cause of the disease, requiring a previous weakening of the constitution to enable it to act.

In the discussion which followed the reading of this paper before the Medical Society of London, DR. HERON said that the bacillus had now been found in many organs, and in the living subject, in the sputum, in the urine, in an ulcer of the tongue, in lupus, and in an unopened knee-joint. He had found the bacillus himself in fifty-four cases of phthisis, and he believed that practically it would always be found in cases where physical signs of phthisis existed. But in some of these cases the physical signs were so slight that he should have hesitated to make a diagnosis without the aid of the bacillus. As regards prognosis, he believed a few bacilli betokened a chronic course; a large number and persistence of them indicated a rapidly fatal course. The same results had been obtained by Balmer and Fraentzel. In rapidly sinking cases the bacilli were found in large numbers, often grouped into masses. This grouping indicated an unusually rapid course, and in one or two cases it had preceded by a day or two an aggravation of the symptoms. Some observations appeared to show that the bacilli might appear before physical signs were manifest. In some cases the bacilli, which had been present in moderate amount, had disappeared from the sputum for several weeks. In such cases he thought that the patient might be considered to be in a fair way of recovery. Heredity he had found to exist in thirty per cent. of his cases at Victoria Park Hospital during four years.

DR. HENEAGE GIBBES directed attention to two points: first, the difference in the structure of miliary tubercles in the lungs and the relation of the bacilli to those of different forms; and, second, the presence of bacilli in the smallest or commencing tubercles. He had examined a large number of lungs affected with the reticular form, and had only succeeded in finding bacilli in three cases, and these in small numbers, distributed through the reticulum. In the non-reticular form, however, he had invariably found bacilli in large numbers in the caseous centre. Dr. Gibbes also pointed out that the bacilli were to be found in the smallest tubercles. A lung may be stuffed with tubercles, each one containing thousands of bacilli, and yet the patient will die before the destructive process has gone far enough to cause any of them to be ejected with the sputum. Thus there were two forms of fatal tuberculosis in which no bacilli could be found in the sputum. —*Lancet*, February 24, 1883.

THE ACTION OF QUININE AND CINCHONINE.—M. BOCHEFONTAINE has found from experiments made in VULPIAN'S laboratory that the action of these two substances is very much the same, though quinine is less of a convulsivant than cinchonine. On the other hand, quinine is the most poisonous. As regards the elimination of these alkaloids, he has found that when injected hypodermically they may be found in the vomited matters, showing that they may be eliminated by the stomach. It is well known that quinine is much the most efficacious therapeutically.—*Revue Scientifique*, February 24, 1883.

THE VOMITING OF PREGNANCY.—MR. BROCK discards the numerous theories which have been proposed to account for obstinate vomiting in pregnancy, and believes that it arises simply and purely from an idiosyncrasy in the individual. Vomiting, of course, may be aggravated by other conditions present, such as undigested matters in the alimentary canal, etc.

He thus summarizes his principal reason for coming to this conclusion.

1. That obstinate vomiting occurs in multiparæ, where the uterine tissues are lax, and where the os is soft, easily dilatable, and even patent enough to admit the tips of two fingers. This causes him to reject the theory held by Bretonneau and Barnes.

2. That obstinate vomiting is absent in the majority of cases where there is a rigid state of the os, and where one would almost expect it invariably to be present, if the cause were that assigned by Dr. Barnes.

3. That obstinate vomiting is often absent in flexions and distortions of the uterus, and often present where there are no flexions or distortions. This would not be likely if Dr. Hewitt's theory were true.

4. Obstinate vomiting is often absent in inflammatory conditions of the uterus, and present when there are no inflammatory conditions. This ought not to be the case if Dr. Bennett's theory be correct.

5. Because he believes a parallel condition is to be seen in other affections clearly influenced by the individual's neurotic constitution; for instance, obstinate sea-sickness, the occasional vomiting that takes place in pseudocyesis, the proneness to convulsions in certain children whenever ill; or, to take a specific case, the vomiting simulating the obstinate vomiting of pregnancy, in a non-pregnant woman, in whom the uterus was normal.

6. Because there is no definite line to be drawn between the ordinary cases of sickness in pregnancy and the more severe cases.—*Glasgow Med. Journ.*, March, 1883.

THE PATHOGENY OF CYSTS OF THE IRIS.—PROF. MASSE, of Bordeaux, reported in 1881 some experiments in which he had caused true cysts to develop in the iris in rabbits by grafting on the iris fragments of conjunctiva and skin. In some recent experiments he has also seen cysts develop in the iris in consequence of grafts of thin fragments of corneal substance. His method was to remove a thin layer of cornea by means of a Beer's knife from the lower border of the cornea, then to puncture the cornea at its upper border and to introduce the fragment, which was about four millimetres long by three broad, into the anterior chamber of the eye. The corneal fragment at once adheres to the iris, soon loses its transparency, and becomes vascular from the formation in it of vessels derived from the iris. Occasionally numerous cysts develop on the iris in the neighborhood of this graft, and may, he thinks, be also attributed to corneal tissue abnormally implanted on the iris.

He thinks that these experiments will prove that ordinarily the production of cysts of the iris is due to the penetration of the cornea by some cutting instrument, and the accidental carrying of some corneal, skin, or conjunctival fragment to the iris, to which it adheres, and then leads to the formation of cysts.—*L'Union Médicale*, February 24, 1883.

MYOMOTOMY.—A recent number of the *Zeitschrift f. Geburtshülfe und Gynäkologie* contains an article by PROF. SCHROEDER, of Berlin, on the extirpation of uterine fibroids, or myomotomy, as he prefers to term it. Although hitherto in this operation better results have, as a rule, followed the extra-peritoneal than the intra-peritoneal treatment of the pedicle, Dr. Schroeder thinks that, as in ovariotomy, the extra-peritoneal method will have to give way to the intra-peritoneal, and that the operation will not have been perfected until a satisfactory method has been devised of securing the pedicle in such a manner that it may with safety be left in the abdomen. The plan which Prof. Schroeder has followed is briefly this: First he ligatures, and then divides, the broad ligaments; then he cuts through the uterus, first peritoneum, then muscular tissue, in such a manner as to leave a strip of

peritoneum like a frill around the muscular surface of the stump. Then the surfaces of the stump are brought together; first the mucous membrane is united by sutures which are cut short, then the surfaces of muscular tissue are firmly secured in contact by sutures not involving the peritoneum; and finally the projecting ring of peritoneum, which has been left for the purpose, is brought together over the stump. An elastic ligature is put round the cervix before cutting away the uterus, and removed when the suturing of the stump is complete. If the tumor is so situate that it can be removed without opening the uterine cavity, of course the proceeding in simpler. Prof. Schroeder has operated sixteen times for uterine myoma, with thirteen recoveries. Of the three deaths, one took place from hemorrhage from the pelvic cellular tissue, one from sepsis, and the other was a case of Martin's operation.—*Med. Times and Gazette*, March 3, 1883.

THE BLOOD-PRESSURE IN MAN.—At the meeting of the Vienna Society of Physicians, held February 16, 1883, PROF. ALBERT demonstrated some blood-pressure curves which he had made on a man in whom amputation of the leg was performed. Before performing the operation the tibial artery was exposed, and a canula inserted and connected with a manometer, and the tracings were made on the kygmographion. The duration of the operation was only prolonged one minute by this experiment, and the course of the wound was not interfered with in the slightest. Some new and interesting results were obtained by this observation. Thus he proved that the blood-pressure was immediately greatly elevated by the assumption of the erect position of the individual (when narcotized), thus disproving the deduction of Marey made from experiments on the lower animals. No respiratory curves could be detected in the tracing. The absolute pressure corresponded very closely with the theoretical assumptions.—*All. Wiener Med. Zeit.*, February 20, 1883.

BROMIDE OF ETHYL DURING LABOR.—M. LEBERT (*Lyon Méd.*, 1883) who has been employing bromide of ethyl largely in midwifery cases, accords it great value in simple confinements. It diminishes and finally suppresses the pain, without having any hurtful effect upon the mother or upon the child. He states also that under its influence labor is more rapid and surgical interference rendered less necessary. The subsequent recovery he believes to be speedier, and the tendency to flooding much less than when the drug is dispensed with.—*Glasgow Med. Journ.*, March, 1883.

RICKETS AND SYPHILIS.—Although some physicians have attributed to inherited syphilis an important part in the production of rickets, it is certain that this opinion is erroneous. Nevertheless, there is nothing incompatible in the two diseases; they may, unquestionably, coexist, and it is probable that the malnutrition due to the specific disease may be a potent factor in the development of rickets in such a case. M. Lannelongue has recently had the opportunity of examining the organs of a boy, aged three years, who presented the symptoms of both diseases. There was an undoubted history of syphilis on the maternal side. The child presented a characteristic rash about the bottom some days after birth, which lasted a long time, and was not treated. Some time later it suffered for six months from snuffles. The signs of rickets in the osseous system first appeared in the right humerus, then in the femur, and afterwards became general. At the autopsy areas of gray consolidation, having the aspect of gummata, were seen in the lungs. The bronchial glands were of a yellowish cheesy appearance, quite different, the report says, from that of tubercular infiltration. The liver was small, and its fibrous portions were thickened; the spleen was in a similar state. The osseous lesions were those of rickets. The epiphyses were soft and contained much "tissu spongoïde." Large oval swellings were present on the shaft, which, on section, showed a piece of atrophied ancient bone surrounded by much of the sponge-like tissue. The bones in places were seen to have suffered incomplete, but never transverse fracture. M. Lannelongue wisely refrains from drawing any positive inferences on the subject of the relation between syphilis and rickets.—*Lancet*, March 3, 1883.

DILATATION OF THE NECK OF THE UTERUS.—M. CHASSAGNY, of Lyons, in a communication made to the Paris Academy of Medicine, describes his method of thoroughly plugging the vagina, and producing rapid dilatation of the neck of the uterus. He places in the vagina a bladder, with which an India-rubber tube is connected; this, with the help of a siphon, conveys into it the water contained in a receptacle placed about two feet and a half higher than the pelvis of the patient. The bladder becomes distended by the water, and soon fills the vaginal cavity. This brings on abundant secretion, and induces energetic contractions, resulting in the physiological dilatation of the os uteri, which is quickly completed by the mechanical action of the bladder. The bladder is placed in the vagina, and the occlusion of the vulva is obtained by means of an apparatus which M. Chassagny calls the *Elytroptérygoïde* (wings in the vagina). It consists of a cylindrical speculum, which holds the badder; this is forced out as the water enters, and the act of distention separates the valves of the speculum, which, resting on the sides of the pelvis, prevent the expulsion of the apparatus and of the bladder. M. Chassagny mentions, in his pamphlet, several instances of induced premature labor, in cases of contracted pelvis, obstinate vomiting, eclampsia, etc. M. Chassagny describes two cases of vicious insertion. In both cases, he induced labor before the natural period by having recourse to rapid dilatation. There was not the slightest hemorrhage, and two living infants were born. In another case, where the mother was in the last stage of suffocative catarrh, M. Chassagny effected, in half an hour, the safe delivery of a living child. The mother rallied for a few moments only. In post-partum hemorrhage, the bladder, by completely filling the uterine cavity, closes the openings of the vessels, and, by artificially restoring the pregnant state, determines uterine contraction. The water in the bladder slowly flows away, until the uterus is thoroughly contracted.—*British Medical Journal*, March 3, 1883.

LAPARO-COLOTOMY FOR REMOVAL OF A FOREIGN BODY.—At the last German Surgical Congress UHDE (*Beilage z. Cbl. f. Chir.*, No. 29, 1882) showed a wooden tool he had removed from the left colon of a man, aged 25, by laparo-colotomy. The tool was one used for sewing sacks, and measured nine and one-quarter inches in length, with a circumference at its thicker end of three and one-half inches. The patient, an inmate of a house of correction, had pushed this into his rectum on the 1st of June, 1882, and left it there. On the 25th of June a sudden movement of the body was followed by abdominal pain, and he found that the tool after that was not so easily felt from the outside of the abdomen as it had previously been. In July he suffered from feverishness, diarrhœa with bloody evacuations, tenesmus, and difficulty of micturition. In October there were rigors, with severe pain in the left hip and thigh. The pain increased so much that on 6th of April, 1882, he came to the hospital at Braunschweig for relief. At that time the foreign

body could be felt through the abdominal parietes to the inner side of the left antr. supr. spine of the ilium. On the next day an unsuccessful attempt was made to reach it by introducing the hand and part of the forearm into the rectum. On the 13th of April an incision was made in the left linea semilunaris, through which the foreign body was felt within the descending colon, jammed between the last rib and the sacrum so firmly that the colon was only brought to the wound by considerable traction. The piece of wood was removed through an incision in the gut nearly one and one-half inches in length, and this incision was closed with silk sutures. The operation was performed antiseptically, and, in spite of considerable vomiting and hiccough during and after the operation, the patient made a good recovery.

Similar operations, both successful, were performed by Reali in 1848, and by Studsgaard in 1878. In the former case the foreign body had been in the bowel for nine days, in the latter for twenty-four hours. In the present case it had been there for three hundred and seventeen days.—*Glasgow Med. Journ.*, March, 1883.

EXTIRPATION OF THE LARYNX.—J. F. COENEN (*Inaug. Diss.*) publishes an analysis of thirty-six cases of extirpation of the larynx, extracted from the well-known works of Schüller and Foulis, to which four new cases of Tilanus, Völker, and Hahn (two) are added. To this may still be added, one by Caselli (*Centralb. f. Chirurg.*, 1871, p. 159), one by Jochelson, one by Zeissl (*Centralb. f. Chirurg.*, 1882, pp. 420, 423), and two not yet published, making a list of forty-one cases. A report is given of the case of Tilanus, of Amsterdam, in which the operation was performed on a man, aged 51, on account of carcinoma. Death occurred in thirty-six hours after the operation, from collapse.—*Centralb. f. Chirurg.*, August 26, 1882.

IODOFORM IN SYPHILIS AND PHTHISIS.—PROFESSOR SCHNITZLER recently read before the Vienna Society of Physicians the notes of a case of syphilitic ulceration of the soft palate, tongue, pharynx, and larynx, complicated by tuberculosis, in which local treatment with insufflations of iodoform produced the most satisfactory results; the perforation of the soft palate became entirely healed, the swelling around the arytenoid corpuscles was reduced, and the tubercular infiltration of the lungs certainly was diminished. He also reported a second case of tuberculosis of the lungs and larynx, in which insufflations of iodoform, continued for five months, appeared to have no influence on the progress of the pulmonary disease, but the pain and irritability of the larynx, as seen in the hoarseness and cough, were decidedly improved.—*Wiener Med. Presse*, February 25, 1883.

PNEUMATURIA.—In two recent numbers of *La France Médical*, DR. GUIARD proposes the term "diabetic pneumaturia," to denominate a condition which he has observed in four cases of urinary affection in the male, complicated with glycosuria. This condition consists in an emission of gas from the bladder, and is said to be independent of any communication with the alimentary canal. The presence of the gas, which has been conjectured, but not yet proved, to consist chiefly of carbonic acid, is explained by the supposition that the glucose has undergone a process of fermentation in the urinary bladder. The escape of the gas occurs in an irregular manner during some part of the act of micturition, and may give rise to a gurgling noise. The existence of the fluid is manifest by no symptoms or physical signs apart from those significant of the associated disease. It has been thought by older observers that the mucous membrane was capable of exhaling gases, but that must be regarded as very problematical. Again, the introduction of air from without during the process of catheterism, especially where the bladder is hypertrophied and dilated, has been assigned as a possible explanation. Dr. Guiard has not been able to satisfy himself of the existence of the torula, nor of the usual products of the alcoholic form of fermentation. There seems to be no obvious reason why the torula should not be introduced from without, by means of the catheter, but until such an occurrence is proved, and until it is made more clear what the nature of the gas is, there can be but little use in speculating on the subject, which, under any circumstances, will hardly be regarded in any other light than in the nature of a clinical curiosity.—*Lancet*, March 3, 1883.

PRACTICAL APPLICATION OF KOCH'S DISCOVERY.—DR. GAIRDNER, of Glasgow, is of opinion that the practical applications of Koch's discovery are to be looked for chiefly in two directions. First, in that of prevention. "This discovery," he remarked at the Glasgow Medical Society, "imposed on medical men the necessity of looking to the observance of the most scrupulous cleanliness. They must have clean hospitals, clean wards and walls, clean rooms and floors. More than ever must this now be the order of the day. They must keep in view that no man was safe unless he got everything around him as clean and as pure as could possibly be managed. Another possible direction in which what they had learned might be applied (though the question was so obscure that probably even Koch would not push it), was in making experiments to ascertain whether the tubercle-bacillus could be cultivated into a milder form. Were this possible, the question might arise whether, as in the case of small-pox and anthrax, the milder form might be utilized as a prophylactic against the more virulent form. In the matter of cure, too, attempts must be made to apply the discovery. For the next year or two, there would be a run on the indiscriminate use of antiseptics in the treatment of phthisis; and probably this would result in disappointment. But this ought not to discourage them, as they might feel sure that, whatever residuum of utility there existed in the antiseptic treatment of phthisis, would eventually be made clear."—*British Medical Journal*, March 3, 1883.

THE VASO-MOTOR FUNCTIONS OF THE SYMPATHETIC.—MM. DASTRE and MORAT have made some new researches on the tonic and inhibitory functions of the sympathetic ganglia, and their relations to the vaso-motor nerves, of which the following are their conclusions: The ganglionic masses situated in the arterial walls have for their function the permission of an antagonism between the dilator and constrictor nerves; and while the inhibitory energy is mainly generated in these cells, the ganglia of the sympathetic system share with them the property of developing vaso-inhibition.

Thus, the superior cervical ganglion exerts a constrictor action on the vessels of the bucco-facial region. The inferior cervical ganglion and first thoracic ganglion exert a constrictor influence on the vessels of the auricular region: this action is reinforced by the constrictor nerves coming from the spinal cord through the third, fourth, and fifth dorsal nerves and their communicating branches. In opposition to this function, however, these same ganglia receive dilator nerves through the eighth cervical and first and second dorsal nerves, and this dilator influence predominates over the constrictor power; for stimulation of the communicating branches dilates the auricular vessels through the local peripheral ganglia.—*Revue Scientifique*, February 24, 1883, and *Gaz. Hebdomadaire*, February 23, 1883.

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SATURDAY, MARCH 24, 1883.

THE GERMAN CHOLERA COMMISSION.

THE Cholera Commission for the German Empire, which held its first session in Berlin in the summer of 1873, has just recently finished its labors. Prof. Pettenkofer, who was a member of the Commission, has made use of the occasion to review some of the more important results of the investigations, especially those which have a bearing on the so-called fungus theory (Pilz-Theorie). Credit is due Prof. De Chaumont for a translation of this important paper. The facts set forth by the Commission seem to leave no room for doubt that the causation of cholera depends on the operation of some of the lowest forms of life, though the discovery of the disease-poison has not yet been accomplished. In the opinion of Pettenkofer, cholera is an infectious disease of the miasmatic class, and its cause depends on conditions altogether external to the body affected (ectogenous).

While the *local* or *topical* view has been generally accepted by the Commission, there is a difference of opinion as to the manner in which the cholera-poison is propagated outside the body. Hirsch supports the hypothesis, "that from the cholera patient an infectious substance is actually thrown off, which, however, is not yet capable of acting directly as a cholera-poison, but only obtains its specific infecting influence after it has undergone a certain change, outside the system of the patient himself, and under the afore-mentioned external circumstances, either upon or in the soil (or a *succedaneum* of the soil)." But Pettenkofer prefers the other hypothesis, namely, "that the reproduction of the cholera-poison takes place quite independent of the cholera-stricken individual (as such), seeing that it may attach itself to persons, sick or well, or to other objects, through the instrumentality of which it may be carried from place to place, and wherever it finds appropriate conditions for its reproduction it may light up an epidemic."

That the disease has a certain relation to human intercourse is admitted, but that it shows a preference for places along the lines of railways does not appear to be borne out by the facts. Contact with the sick or mere intercourse with cholera-stricken places does not lead in itself to the spread of the disease; it is the locality to which the disease-germ has been brought, and in which favorable conditions exist for its propagation, that is chiefly concerned in the extension of the disease. Cholera cannot therefore be said to be a contagious disease in the strict sense of the term.

The water theory, which has so many zealous supporters in England, has been cast aside as untenable, at least the labors of the Commission have developed no facts which help to defend it. Unwholesome drinking water may favor the spread of the disease, but to it no greater influence is attributed than to bad food, or bad clothing. An abundance of pure drinking water is therefore insisted on only upon general hygienic grounds.

Pettenkofer is a firm supporter of the parasitic theory, and he considers himself sustained by the results of the work of the Cholera Commission in the belief that the poison of cholera is an organism which is spread by intercourse with places in which the disease is endemic or epidemic. The poison, when brought into other localities without being deprived of its active qualities, can be reproduced only when it finds in such places a suitable substratum or nidus, which is to be looked for in the soil, and serves as its nutriment or host.

The conclusions of the Commission in reference to the prophylactic measures suggested by the investigations, are of the highest practical value. The recommendations are as follows: "Of all the measures which may be applied to the prevention and combating of cholera, those take the first place which have for their aim the improvement of general sanitary conditions; all specific measures against cholera will prove unavailing, unless we pay the strictest attention in inhabited places to the purifying of the soil from organic and easily putrefying refuse, to the drainage of the soil, to the constant flushing of the sewers, to the frequent emptying of cesspits, to the careful inspection of dwellings, and closing those that are really hurtful, the provision of pure water both for drinking and other domestic purposes, and the like." The Commission expresses here the united opinion of the most experienced physicians, when it says, that the strictest attention

to all the measures demanded by public general hygiene offers the best protection not only against cholera, but against all other epidemic diseases; but that those measures will be successful only on condition that they are followed out continuously and at all times; for it is a fatal error to imagine that having recourse to them only at the approach of an epidemic will ward off the incursions of disease.

PREHISTORIC TREPHINING.

WHEN La Motte, in 1705, first treated epilepsy by trephining, he little thought that he was but reviving a prehistoric operation. Epileptics, and the "daft," as all who in their "teens" have read Cooper by the furtive midnight-oil well know, were objects of awe, and, perhaps in an earlier age, of veneration; and naturally fragments of the skulls of such persons very likely would be prized as amulets, protective against these and similar diseases. Moreover, the ignorant and degraded peoples of the Stone Age would scarcely discriminate between epileptic and ordinary convulsions, especially in children, and would be apt to attempt to remedy both by like means.

As early as 1868 M. Prunières discovered in the dolmens of La Lozère round pieces of human skulls, which he named "rondelles," or "cranial amulets," and made them the subject of subsequent communications both to the French Association for the Advancement of Science and to the Paris Anthropological Society. Various skulls also were found, which had evidently furnished such fragments. The shrewd eye of Broca, however, quickly observed that the smoothly rounded and bevelled edges were not the result of artificial polish, but of natural cicatrization, and that the skulls had been trephined in many cases long before death. He pointed out that they were not congenital, for they were not the normal symmetrical parietal foramina, nor were they the result of war or accident, since none existed in the forehead, nor were their shape or size consistent with the rude weapons of that period. Moreover, no evidence of fracture or depression was to be seen, such as would be inevitable were they of such origin. And though the skull discovered two years since by M. Parrot shows evidence of disease for which fronto-parietal trephining was done, yet this is a unique exception.

All the specimens thus far known are from the Neolithic, or Polished-stone Age, the cremation of the later Bronze Age having probably destroyed nearly all evidence of the custom, if it then existed.

Broca established the significant fact that the operation was performed in childhood, since all the evidences of recent inflammation had long since disappeared, and in one skull at least the deflection of the sagittal suture strongly toward the trephined side, was evidence of long-continued later growth.

The openings are always elliptical, one or two inches long, and a half inch or less wide, and bevelled at the expense of the outer table. They exist in both sexes, at all points covered by the hairy scalp, even in the line of the sagittal suture and the superior longitudinal sinus. In some, multiple openings exist, and some twenty skulls show the removal of the outer table alone by scraping, as was recommended by Johan Taxil in 1603 in his treatise on epilepsy. The edges of the rondelles cut from such skulls as Broca pointed out, are partly of the cicatrized margin of the opening made by the trephine and partly the rougher non-cicatricial margins, the result of posthumous trephining in the removal of the amulet from such highly prized skulls.

DR. ROBERT FLETCHER, of the Surgeon-General's Office, in his recent paper on "Prehistoric Trephining," in the *United States Geographical and Geological Survey* (from which chiefly we obtain the above facts), has summarized Broca's views, and has added all the more recent discoveries together with a number of excellent plates illustrating both the rondelles and the skulls from which they are obtained. Nearly all of the earlier specimens were found in France, but Wankel has found some in Bohemia, Dudik and Virchow others in Bohemia and Poland, and other observers have found a few in Denmark and Algeria. None have been found in Italy, Great Britain, or on this Continent. The remarkable Inca skull of Squier, with its ⧓ shaped opening, and those found by Gilman in Michigan, though they have perforations in the skull, are entirely different in character from the trephined skulls of La Lozère. The belief that epileptics were possessed by an evil spirit seeking escape would seem to have led to the operation, and Dr. Fletcher points out that the practice is not uncommon even at the present day among savage tribes, such as the Kabyles, of Algeria, and the inhabitants of the Loyalty Islands. Among the former multiple trephining is not uncommon, and M. Martin records the fact that some persons had submitted to it five or six times. Modern surgical experience shows that the operation *per se* is not a dangerous one (the serious injury which necessitates its performance being by far the most dangerous factor), and the fact that the Kabyles even resort to it in cases of pretended injury, in order to obtain "blood money" for violence done, is a marked confirmation of these views.

The trephine dates back to at least five hundred years before Christ. No such instrument, however, existed in the Stone Age, and the openings are of such character as to forbid the surmise that any

similar instrument was used. Most probably it was done by scraping, a method which, while tedious and painful in the adult, Broca has shown would be very brief, not exceeding four minutes, in the thinner and softer skull of childhood.

MIXED ANÆSTHESIA BY ETHER, MORPHINE, AND ATROPINE.

UNDER the above title, M. P. Aubert, of Lyons (*Lyon Mèdicale*, 14 Janvier, 1883), discusses the question of the conjoint administration of ether or chloroform, morphine and atropine. There are some very interesting subjects broached by Aubert, and the results of his experience are worthy of attentive consideration.

Those of our readers who have followed the history of anæsthesia, will recall the fact that Boston and Lyons, since the discovery of insensibility by inhalation of vapors, have remained loyal to ether as the best of the various agents hitherto brought forward for this purpose. Aubert, a representative of the Lyons sentiment, is not unmindful of the position of chloroform as an anæsthetic agent. His opinion is, therefore, the more valuable since he does not ignore the utility of other agents, although an advocate of ether. He also refers to the method of inducing the anæsthetic state, lately brought forward by M. Paul Bert, which consists in the administration, under pressure, of a mixture of oxygen and nitrous oxide; but this method, although strictly physiological, is objectionable because of the complexity of the apparatus required for its proper execution, and hence it is not feasible under the ordinary circumstances requiring the administration of an anæsthetic. To attain the maximum of safety with the anæsthetics now available, is the problem. How best to secure the safe administration of ether or chloroform is, therefore, the point for consideration. M. Aubert maintains that the best results are had from the method of "mixed anæsthesia." This is the outcome of his experience, and of the collective observation of the Lyons surgeons. He calls attention to the fact that so long ago as 1878, Brinon, one of his pupils, presented a prize thesis on the anæsthesia obtained by the combined action of chloroform and morphine. During the following year, M. Hortholès demonstrated that the combination of ether and morphine was superior in respect to the promptness of the anæsthetic action, and the relief to the after-vomiting, to chloroform alone, or to chloroform and morphine. In 1882, M. Morat communicated to the profession the result of experiences he had acquired, in conjunction with M. Dastre, regarding the combined action of an anæsthetic with the subcutaneous injection of morphine and atropine. The theoretical view which led to this combination may be stated as follows:

Vulpian has shown that the excitability of the pneumogastric is increased by anæsthetic agents—whence the vomiting, and sometimes cardiac arrest. Now, morphine, whilst it increases the anæsthetic action, does not to any considerable extent lessen the effect on the pneumogastric nerve; but atropine, by removing the inhibition exerted by the vagus, removes the most important source of danger.

The injection of the solution of the combined morphine and atropine is practised twenty or thirty minutes before the administration of the anæsthetic—usually ether. The ordinary dose of morphine is from $\frac{1}{12}$th to $\frac{1}{4}$th of a grain, and of atropine from $\frac{1}{180}$th to $\frac{1}{30}$th of a grain. Complete insensibility is obtained in from three to seven minutes. The assistants, says Dr. Aubert, have been much surprised to note the difference which exists between the method of mixed anæsthesia—so calm and silent—and the inhalation of ether alone, with its period of excitement, and the after-vomiting and depression.

The great superiority of ether over chloroform, as respects safety, is certain; but the unpleasant effects of the former, and the prolonged stage of excitement produced by its inhalation, constituted almost insuperable objections to its use. M. Aubert now maintains that the method of mixed anæsthesia obviates these objections, so that ether may be given with the same ease and satisfaction as chloroform.

In view of the recent sad examples, illustrating the danger of chloroform anæsthesia, it is the more desirable to be put in possession of a method which combines the facility of chloroform inhalations with the superior safety of ether. In the method of "mixed anæsthesia," this desirable result seems attained.

POISON IN THE KINDERGARTEN.

IT goes without saying that our children ought not to be poisoned. Yet in the Kindergarten, one very serious and mostly unsuspected danger has been brought very forcibly to our notice within the last few days, and we call instant and urgent attention to it.

An analysis of eighty-four samples of the paper used in the Kindergarten weaving, shows that *arsenic* is present to a considerable extent in a large number of the papers, and in eight of the samples to a very dangerous degree. The danger is especially great when we remember that young children not only handle them, but are very apt either to handle them with wet fingers or even very often to put them into their mouths and chew them. All of the eight worst papers were of the brightest and therefore the most attractive colors, three being greens, three reds, one blue, and one purple. They were all taken from the sample book of one Massachusetts firm, who

supply such papers in large quantities all over the land.

In one respect the firm is commendably honest. In their catalogue they openly state that many of the papers do contain arsenic, and that the brightest greens and reds cannot be made from other than arsenic colors. But they make light of the whole affair, saying, that "a child old enough to use the paper material should be too old to put such things in its mouth." As if *any* one under seven, at which age children leave the Kindergarten, were too old to put such things in its mouth. Moreover, they quaintly add, "we have yet to hear of a single Kindergarten pupil that has ever been injured by the use of the colored papers." Do they propose to go on furnishing papers known to be poisonous till they *do* hear of a child poisoned by them? Surely after the repeated exposure of the dangers of arsenic in wall papers it is little less than criminal to continue to make them, and least of all to make them for the use of children.

As to lead and other such poisons in colored papers the quantity that has to be eaten is so great, as compared with arsenic, that they are not seriously dangerous.

We hope that the State Board of Health of Massachusetts will investigate this matter. Indeed, it would be highly proper for the legislatures of our various States to make both the manufacture and the sale of such papers, whether for wall papers or other purposes, a penal offence.

PNEUMONIA.

BUHL, it will be remembered, makes the assertion that fibrinous or croupous pneumonia never terminates by passing into sclerosis of the lung. Two cases observed at the Tübingen policlinic by Jürgensen prove, however, that this mode of termination, although rare, does sometimes take place.

In some observations on the treatment of pneumonia, Prof. Jürgensen expresses himself as opposed to the administration of salicylic acid as an antipyretic, because it reduces the temperature so rapidly as to endanger collapse. Quinine is not open to this objection. He reserves digitalis for cases in which the action of the heart is irregular.

URÆMIA OF HEPATIC ORIGIN.

THE source of urea formation is by no means certainly known. Any facts bearing on this interesting question must, therefore, have a value determined by their relevancy. M. Débove has recently submitted a communication on this topic to the Medical Society of the Hospitals of Paris. As has been maintained by M. Brouardel, in most hepatic diseases a sensible decline takes place in the quantity of urea in the urine. It is held by most authors, that the diminution is in urea formation, rather than in the excretion of this substance, but M. Débove maintains the latter view. He has sought to maintain this position by comparative examinations of the blood, and of the urine. He has ascertained, he asserts, that in many chronic hepatic affections the quantity of urea in the urine is notably less, whilst in the blood it is increased. He holds, therefore, that there is a form of uræmia which is hepatic in origin. He explains these phenomena by assuming that the bile elements cause a retention of excrementitous matters in the blood.

DR. FORBES' ACQUITTAL.

SUCH wide publicity has been given to the arrest and indictment of Dr. Wm. S. Forbes, Demonstrator of Anatomy at the Jefferson Medical College, for conspiracy to rob Lebanon Cemetery, in this city, that it is only just that equal publicity should be given to the fact that twelve men, after a full hearing of the evidence, and in the face of a public feeling largely unfavorable to the accused, have unequivocally pronounced him "not guilty."

As every anatomist knows, the present law relating to anatomy is so ineffective, and the demand for subjects so pressing, so imperative, that, while refusing to take bodies from strangers (we would hardly say "buy," as did the learned judge in his charge, in spite of the fact that the law punishes "traffic" in human bodies), yet the medical schools *must* take "unclaimed bodies" from those whom they know, and who regularly bring such to them, without any inquiry as to where they came from, trusting to the integrity and law-abiding character of those who deliver them. As the learned judge said in his charge very properly, "for various reasons secrecy is maintained concerning them."

We earnestly hope that the new Anatomy Act may soon be passed, and with it we believe all temptation to violation of the law will disappear, for the supply of material will be abundant, and no anatomist will be put to the large expense, inexpressible annoyance, and terrible worry and strain to which our *confrère* has been needlessly subjected for the last three months. We congratulate him heartily on his vindication.

WOMEN AS PHARMACISTS.

WE are glad to see that at the late commencement of the College of Pharmacy, in this city, for the first time a woman had the degree in pharmacy conferred upon her. Of all the various branches of labor opening to women, none seems to us more promising than this, and we hope that many more may follow in her footsteps.

REVIEWS.

? QUIZ-COMPENDS ? PRACTICE, PART I. By DANIEL E. HUGHES, M.D., etc. In two parts., pp. 105. Philadelphia: P. Blakiston, Son & Co., 1882.

THE suggestive mark of interrogation may be interpreted to express the pertinent inquiry—*cui bono?* That the publishers will reap a greenback harvest there can be no doubt. That students will solace themselves with the pleasing notion, that here at last is an easy road to the acquisition of medical learning, may also be regarded as certain. But what of the author? We fear his attempt to smooth the rugged pathway to the doctorate will not redound to his own credit. When we come to examine his attempts to make plain the dark corners of medical knowledge, there arises a suspicion that his aspirations are beyond his powers—that his attempts to scale the heights are rendered abortive by insufficient legs. Let us examine his record. We need not go beyond the first page.

Organic disease is one "when located in some particular structure." It becomes "functional when the perverted process cannot be located." If a disease of the brain cannot be located, it becomes functional, therefore!!

A *diathesis* is a "hereditary predisposition to certain diseases." A predisposition cannot be acquired, must be inherited. On the next page we learn that "the *prodromes* are the earliest recognizable symptoms; when sudden in their onset, the disease is said to be *acute;* when less sudden, *sub-acute;* when gradual or slow, *chronic.*"

In this brief paragraph there are several errors. Prodromes are, as the term implies, forerunners or preliminary symptoms, and may be the same for many affections. Again, the terms acute, sub-acute, and chronic, apply not to the prodromes, but to the type of the case proper.

We might select a multitude of examples of erroneous definition and inaccurate statement. It is very unfortunate that medical students are to be induced to follow such a guide. If they are to depend on such a compend, it ought at least be accurate, and the profession has a right to demand that books of this kind be correct in statement, how deficient they may be in all other respects. Even if, however, quiz-compends are without defect in their own scope, they have no right to exist. The appearance of such a series as now announced is truly ominous, for it indicates the existence of a large number of students who are solely concerned to be able to pass the examination for the doctorate.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 27, 1883.

THE PRESIDENT, T. M. MARKOE, M.D., IN THE CHAIR.

ABSCESS IN THE LOWER PART OF THE FEMUR.

DR. LANGE presented a patient, twenty-eight years of age, who had had bone abscess. When thirteen years of age he was subject to osteitic affection of the femur, and during the next six years suffered from repeated exacerbations of the disease. The disease commenced with very severe pain which lasted for one year, but not until the end of two years did a sinus open and some pieces of bone make their exit. At the end of six years, no operation ever having been performed, all the sinuses closed and the patient remained apparently well until last August, when he again began to suffer from severe pains without apparent cause, especially at night, and when Dr. Lange saw him, in the beginning of October, he was very much reduced in strength, and presented that exhausted appearance and pale-gray complexion ordinarily seen with chronic bone abscess. On examination, the femur was found very much thickened in its lower half and somewhat thickened higher up. There was pain upon deep pressure in the region between the middle and the lower third of the thigh. The entire history of the case made it probable that central abscess of the bone existed, and he therefore, early in October, laid bare the bone, and bored into it in two places without finding pus, but on making a third opening pus discharged, and he then enlarged the opening and found quite an extensive abscess, the cavity of which seemed to be very narrow and made up of several lacunæ, one of which contained a small sequestrum. About half of the femur had to be chiselled open, the thickness of the wall of the abscess reaching in some spots nearly ½ inch. The immediate surrounding of the pus cavity consisted of soft cancellous tissue, permeated by granulations and small pus cavities. But, to that a very thick sclerotic bone substance followed. After the abscess had been evacuated and scraped out, the soft parts were closely stitched together by *étage* sutures; two bone drainage-tubes were inserted, and permanent antiseptic dressings were applied. During the next six weeks only four dressings were applied, and no accident took place, except necrosis of the superficial fascia in the upper part of the wound, and there still remained some small openings, which were simply superficial and had no connection whatever with the cavity of the bone. The femur upon the affected side was about an inch and a third longer than the other. Furthermore, the position of the knee was in hyperextension, and at the same time there was a slight amount of mobility in the joint greatly to the discomfort of the patient, because it gave to him a feeling of uncertainty in stepping. To remedy this to a certain extent, Dr. Lange had advised that an apparatus be worn which should fix the knee. During the past week pain had occurred again, but it differed in character from that from which the patient first suffered, and was shooting up and down the anterior aspect of the thigh. This pain had been relieved by the administration of quinine, and besides, the patient had a swollen spleen. At the time of the operation Dr. Lange opened the cavity of the knee-joint, which he found obliterated, but no unfavorable symptoms followed. An especially interesting feature in the case was the smooth healing of the bone cavity that followed complete sewing up of the soft parts, with the after-treatment adopted. The scar showed no depression, and was narrow on account of the first intention to the greatest extent.

OSTEOMYELITIS OF THE ILIUM.

DR. LANGE also presented a patient, sixteen years of age, whom he saw for the first time two years ago, and four weeks after the beginning of a severe illness, with the formation of a large abscess on the anterior aspect of the iliac fossa. The hip-joint was apparently not involved. He saw the patient in consultation with Dr. Hoeller, of this city, and made a number of incisions for the evacuation of pus. The case illustrated that spontaneous separation of the epiphyseal junction might occur suddenly, as in the next following week the patient's limb suddenly showed the deformity characteristic of fracture of the neck of the femur. A weight and pulley were then applied, and the great shortening which had occurred was for the greater part removed. Six months after the beginning of the abscess, Dr. Lange performed necrotomy of the ilium,

and removed twelve pieces of bone, mostly superficial, some of them central, especially in the upper part of the acetabulum. The patient made a comparatively speedy recovery. The position of the limb remained unsatisfactory, namely, in very great adduction. There was not complete anchylosis. The weight and pulley were applied, and the limb brought down, so that the difference in length between it and its fellow was not quite one inch, and with a slight corresponding elevation of the heel of the shoe on the affected side, the patient was able to walk very well. Since that time, the adduction had relapsed, and Dr. Lange thought it would be best to let it go on, and, after complete anchylosis had taken place, to make section of the bone for the correction of the deformity. He had had three cases of acute osteomyelitis of the ilium, in two of which there was separation of the epiphyseal junction at the neck of the femur. In one case he took particular care to avoid separation by applying a weight and pulley, and yet the accident occurred.

EXTIRPATION OF THE LOWER PART OF THE RECTUM, AND ALSO THE COCCYX.

DR. LANGE also presented a patient from whom he had removed the lower part of the rectum for cancer, and, to facilitate the operation, he had also removed the coccyx. The patient had been operated upon twice, the second time for recurring disease within the pelvis in the depth of the ischio-rectal fossa. At the present time he has several suspicious glands in the inguinal region. He presented the patient to illustrate the comparatively good functional result which followed the operation, namely, he was able to control the discharges from the bowels perfectly if the passages were consistent. Flatus escaped, however, without the control of the patient. The first operation was performed one year ago; the second operation was performed last October. The coccyx was removed at the first operation; at the second operation he removed the mucous membrane to some extent, on account of prolapsus. The removal of the coccyx at the first operation facilitated operative measures very much. There was not much obstruction of the bowel before the first operation was performed, and the patient was not aware of the existence of the disease until about six weeks previously; and yet he had extensive disease of the rectum. He had supposed that he was the subject of hemorrhoids, and had been treated for that affection. The explanation which Dr. Lange gave of the ability of the patient to control the discharge from the bowels was that the sphincter tertius maintained its function. It could be felt as a weak and soft somewhat incomplete closure immediately above the new external opening.

DR. L. A. STIMSON remarked that Dr. Lange's first case illustrated the importance of early attention to purulent disease within bone. He recalled a case in which he trephined the head of the tibia in a patient fourteen or fifteen years of age, who had been suffering for eighteen months with recurrent attacks of pain in the shaft of the tibia, and thickening of the upper and middle thirds of the bone had developed. He localized the seat of maximum pain, and trephined at that point, and pus was found in the medullary cavity after passing through a layer of compact bone one-fourth of an inch in thickness, and the operation was followed by rapid recovery, which had remained permanent to this date—nearly three years. At the time of the operation there was no sinus or discharge of pus, but the bone appeared somewhat thickened, and was sensitive, and the soft parts lying over it were thickened. On reaching the bone, the periosteum was found thickened, and an abscess opened which contained from half an ounce to an ounce of pus.

DR. POST remarked that in cases of persistent pain in the tibia confined to a limited space, a diagnosis of abscess was a pretty safe one to make.

DR. L. S. PILCHER then read a paper on

THE USE OF LIGATURES IN THE WOUNDS OF VEINS.

Dr. Benj. Travers, in his essay on *Wounds and Ligatures of Veins*, which was published in 1811, seems to have been the first to draw special attention to the dangers attending injuries of veins. He speaks of the "fatal catalogue of tied veins," and says that he has observed something like that superstitious alarm which is excited by events that we do not expect and cannot explain, when such a catalogue is compared with the generally successful cases of tied arteries. Mr. Travers says that it has been shown "that the inflammation of the interior tunic of a vein sometimes follows a puncture, sometimes a division, a ligature encircling the tube, or including only a part of it, or arises spontaneously from an inflamed surface, of which the veins form a part." He ascribes to John Hunter the credit of having first distinctly pointed out the liability of the interior tunic of veins to inflammation, and exclaims that it is most extraordinary "that this alarming and often fatal inflammation of the inner coat of veins should so long have escaped the notice of the profession." The language of Dr. Hunter (quoted by Mr. Travers from the *Medical and Chirurgical Transactions*, vol. i. pp. 18, 19) is, "I have found in all violent inflammations of the cellular membrane, whether spontaneous or in consequence of accident, as in compound fracture, or of surgical operation, as in the wound of an extremity, the coats of the larger veins passing through the inflamed part become also considerably inflamed, and that their inner surfaces take on the adhesive, suppurative, and ulcerative inflammations; for in such inflammations, I have found in many places of the veins adhesions, in others matter, and in others ulceration." "I have found them [these appearances] in the bodies of those who have died from amputations, compound fractures, and mortification."

Mr. Travers, in this essay, remarked the indisposition to inflame manifested by the inner tunic of veins as a rule, having himself observed that, even after ligation, there was no blush upon the inner tunic, much less any sign of adhesive inflammation, or thickening of the proper coats of the vein, or agglutination of the contiguous folds (p. 201), so that the process of healing and of division by ulceration seem to him to be conducted without any manifestation of inflammatory action in the interior tunic. He thought, however, that this was not inconsistent with a liability to inordinate and excessive inflammation under adequate excitement.

This opinion as to the indisposition of the inner tunic to inflame has become more positively expressed by recent writers. Nicaise, in his thesis "On Wounds and on Ligation of Veins" (Paris, 1872), p. 74, states that, though Hunter, and after him Ribes, Gendrin, and others, considered phlebitis as an inflammation of the internal tunic, numerous observations since their time have demonstrated that primary inflammation of that membrane is very rare, if, indeed, it exists. He does not enter into any discussion of the subject, but contents himself with saying that most frequently inflammation begins in the cellular tunic, and thence may spread to the middle and involve also the internal tunic. He quotes Trousseau and Rigot (from the *Arch. Gén. de Méd.*, 1827), as saying that, "Every year we see patients succumb to phlebitis supervening upon phlebetomy. We are far from denying the frequency of the accidents which follow bleeding; but too often there has been taken for an inflammation of the vein what was only inflammation of its cellular sheath." A kind of periphlebitis being the real malady. Still

more positively does Mr. Callender, in the article on diseases of veins—Holme's *System of Surgery*—claim that primary inflammation of the inner tunic of veins is never met with, and that in all cases we have to do with either progressive coagulation of blood within veins and its sequelæ, or with diffuse phlegmonous inflammation of their connective-tissue sheaths; thrombosis and periphlebitis being thus substituted in surgical nomenclature for phlebitis. Diffuse periphlebitis, according to this author, cannot occur in a patient in a fair condition of health, and when it does occur after puncture or division of a vein, it is not a consequence of the application of a ligature, for, whether the vessel be tied or not, this inflammation may supervene.

The changes of views which appear from these brief historical references, to have taken place as to the liabilities to inflammation inherent in veins, have been attended with corresponding changes in the character of the surgical interference to which they are subjected. To a period during which there was entire absence of apprehension of danger, so that, to use the language of Travers, they were attacked with singular rudeness, pricking, cutting, tying, and burning them, without ever adverting to any other than the mechanical effects of such operations upon the diseases for which they were instituted, there succeeded years during which they came to be considered as especially intolerant of interference, and prone to the development of unexpected and uncontrollable complications. To this has now succeeded another period in which any special vulnerability in veins is not admitted, and a tendency to return to unrestricted attacks is manifest.

For the purpose of eliciting the experience and opinions of the surgeons of to-day, on the important question of the hazards of surgical interference with veins, I took up one year ago, in a paper which I read before the Philadelphia County Medical Society, the subject of the ligature of large venous trunks. It will be remembered that Dr. S. W. Gross, of Philadelphia, in a paper published by him in the *American Journal of the Medical Sciences* in 1867, upon wounds of the internal jugular vein and their treatment, reached the conclusion that the dangers of ligation of that vessel had been greatly exaggerated, as not a single example had been found by him, in which ligation had been followed by diffused phlebitis. Embodied in that paper was also a summary of the teachings of prominent surgical authors of the present century up to that date, as to venous ligation in general, from which it appears that while a numerical majority teach that its risks have been greatly exaggerated, yet a sufficiently large number, including the names of Roux, Lisfranc, Langenbeck, Miller, Erichsen, and Pirogoff, speak of it as being attended with great danger, and to be avoided by all possible means.

I called attention also to the additional source of danger which had been claimed to exist in the denudation and contusion of veins. Dr. Gross, in his paper, had quoted the observations of Broca, who, in his treatise on aneurisms (*Des Aneurysmes et de leur Traitement*, p. 478, Paris 1856), describes inflammation of the accompanying vein denuded, perhaps bruised in exposing an artery for the purpose of ligation, as one of the possible complications of such operations. Also, two cases reported by Langenbeck (in *Archiv für Klinische Chirurg.*, 1860, t. i.), in which thrombosis followed, with a fatal result in one of the cases; a denudation of veins occurring in the course of the removal of tumors; also, observations of a similar nature by Post and J. C. Warren.

Nicaise, in his thesis already referred to, quotes these observations also, and adds that Ollier, of Lyons, has several times observed this accident, so that he has formed the opinion that extensive denudation of a large vein is more dangerous than ligation; and that where, after such denudation immediate union is not obtained, when the flaps that cover the veins slough; when, in a word, the veins remain exposed at the bottom of the wound, all the accidents of an extensive and progressive thrombosis are likely to occur. In three instances Ollier had seen death follow in from eighteen to thirty-six hours after the beginning of the thrombosis. Happily, however, says Nicaise, denudation does not inevitably involve accidents so grave as those noted by Ollier; most frequently it is followed by no complication. Nicaise also quotes the opinion of Weber (Pitha und Billroth, *Handbuch der Allgemeinen und Speciellen Chirurgie*), that contusions of veins are more likely to be followed by thrombosis and suppurative periphlebitis than are pricks and lateral wounds.

In the discussion[1] that followed the reading of my paper, Prof. Henry H. Smith stated that he was not aware that any doubt existed among surgeons of the present day as to the advisability of ligating veins, although he was of the opinion that a diseased vein, *e. g.*, varicose, would be apt to give trouble under conditions in which a healthy vein would do well; citing a case in which varicose veins of the leg were tied, and death ensued in five days.

PROF. SAMUEL D. GROSS said that he had long been in the habit of ligating veins, and early in his professional life was impressed with the fact that the fear of such ligations was unfounded. He was opposed to lateral ligation, and thought it always best to tie the vein in its continuity. Varicose veins he would not ligate, nor would he excise an exposed vein, unless it could not be avoided.

PROF. S. W. GROSS stated that he was now cognizant of sixty cases in which the internal jugular vein had been tied; forty-seven of these were examples of ordinary deligation, of which one terminated in death by thrombosis. Thirteen were instances of the application of a lateral ligature, of which four proved fatal from secondary hemorrhage. The freedom from hemorrhage after the ordinary procedure, and the occurrence of fatal bleeding in more than one-third of all cases after the lateral ligature, was a sufficient ground for its exclusion from practice. He believed that veins may be ligated with as much confidence as arteries.

DR. PACKARD stated that, in his experience, whether in cases under his own care or in the hands of other surgeons, ligation of veins had been attended by no bad results.

DR. HUNTER stated that Dr. Agnew had ligated the internal jugular vein at its point of emergence from the skull, the ligature coming away at the end of the second week without unfavorable symptoms.

DR. BLACKWOOD had seen during the war many cases of gunshot wounds of the vessels of the neck; whenever lateral ligation had been used, in the cases in whose after-history he had been able to follow, a fatal result from secondary hemorrhage had ensued. He had no fear in ligating veins, though he agreed that diseased veins do not bear ligation like healthy ones.

DR. NANCREDE reported a case in which he had been compelled to keep the internal jugular vein exposed for a long time, in an operation which was followed by prolonged suppuration, during which the vein was kept bathed in pus, without injury to it. He never hesitated to tie veins in the course of operations.

DR. ALLIS had applied a lateral ligature to a wounded internal jugular vein, and had obtained rapid and permanent recovery. Dr. Parkes, of Chicago, had

[1] See Philadelphia Medical Times, 1882, p. 664.

seen lateral ligation used in three cases of wounds of the internal jugular vein, with recovery in each case, while in one case, after complete ligation, death was occasioned in thirty-six hours from thrombosis.

DR. KEEN could not agree with previous speakers as to the inadvisability of operating upon diseased veins. In varicose conditions he had several times exposed and ligated the veins at points one inch or more apart, and exsected the intervening portion by the antiseptic method, and with excellent results. In his opinion, the ligation of varicose veins by the catgut ligature was the best treatment.

It will be seen that the points upon which discussion was elicited involved the subjects of the safety of ligation in general, the propriety of the application of a lateral ligature in certain cases, and the effects of exposure and denudation of veins. Despite the freedom from disaster, which had characterized the large experience of the eminent surgeons who took part in this discussion, and which thus far has likewise been enjoyed by myself, I am not quite prepared to dismiss, as without foundation, the opinions of the many other eminent observers who declare that surgical interference with veins does involve peculiar dangers. While so strongly expressed an opinion as that of Chassaignac that "ligation is one of the most dangerous operations of surgery" (*Traité Clin. et Prat. de l' Operat. Chirurg.*, t. I.), may not appear to be justified, or even that of Erichsen, that the application of a ligature to a vein "should, if possible, always he avoided" (*Science and Art of Surgery*, 1878, vol. i. p. 278), it is still undeniable that there are special hazards that attend the surgery of the veins. "The fatal catalogue of tied veins," referred to by Travers, the yearly deaths from inflammatory complications following phlebotomy, admitted by Trosseau, and the fatal cases of thrombosis, reported by Ollier, remain each as types of a distinct class, to which fresh examples are from time to time being added, of dangers that are peculiar to veins, and which ought, even in this day, to receive due attention from surgeons. The direction of the blood current in the veins towards the heart through continually widening channels, and the favorable arrangement of the connective-tissue sheaths of the veins for the propagation along the course of the veins, as in lines of least resistance, of spreading suppurative inflammation, constitute the conditions which, by their combination, favor the production of disastrous complications after wounds of these vessels.

The more accurate knowledge which recent research has given us of the etiology and pathology of these complications, has made more emphatic the truth that in addition to the predisposing causes, both local and constitutional, that may exist, the introduction of a continuously active irritant from without through a wound is essential to the establishment and extension of the morbid processes. Here we venture upon a field which is yearly becoming less and less debatable; that is, the agency of micro-organisms in the production of spreading inflammation. The differences in the intensity of the results of these agents in different cases seems to be due to differences in the resisting power of the tissues to which they gain access. The presence of defective resisting power gives a ready and sufficient explanation why, in persons depressed and enfeebled from any cause, a wounded vein should be more likely to give trouble than in the robust and vigorous. Also, it explains why the nutritive defects in the tissues that lie about varicose veins should be sufficient to render operations upon such veins extra hazardous. An important consideration in this connection also is that, in most instances, the resisting power of the tissues, though diminished, would still be sufficient to resist attack and accomplish repair without serious complication, if they were not submitted to extensive and repeated traumatism. Thus from the point of view of the relation of micro-organisms to wound disturbances, the conclusion forces itself upon the conviction of the observant surgeon that in all cases care should be taken that a minimum of traumatism should be inflicted upon veins and their ensheathing connective tissue; particularly when adequate measures to prevent the access of noxious micro-organisms are impracticable, does the importance of fostering the natural resisting power of the tissue demand recognition.

If the tissue conditions which attend varicose veins be taken as an example of a vulnerable tissue, it is easy to understand why so frequently disastrous consequences have followed operations upon them conducted without antiseptic precautions; and why, with such precautions, such disasters rarely, if ever, occur. In such procedures as the strangling of a varicose vein between an unirritating metallic pin inserted behind it, and a compress laid over it upon the surface of the skin, or the subcutaneous injection into the neighborhood of the vein of a substance capable of exciting a local adhesive inflammation in the tissues reached by it, the two opposite conditions of wound treatment are exemplified. In the one, no protection from hurtful atmospheric constituents, but a minimum of local tissue irritation; in the other, a maximum of local tissue traumatism, with exclusion of atmospheric germs. It is to be expected that excellent results should attend either method, though both are imperfect in their conception, and both more hazardous than methods in which the two conditions are combined; that is, methods by which both exclusion of noxious micro-organisms is secured, and a minimum of local tissue traumatism is produced.

The question of the relations of micro-organisms to the effects likely to follow involves, in addition to these differences in local tissue, vulnerability exemplified in the case of varicose as compared with sound veins, and the different constitutional susceptibility possessed by different individuals to the effects of micro-organisms: as Ogston (*British Med. Journal*, March 12, 1881), when injecting micrococcus pus into the tissue of mice, found that, though the same dose was injected into each of a number of mice of the same litter, the effects greatly varied—one, perhaps the largest and strongest, escaping unscathed or with but slight illness; in others, abscess developing; in some, necrosis; and in one, perhaps the smallest or most weakly, death from septicæmia. So also with the same amount of traumatism and the same exposure to the access of micro-organisms in operations involving veins. The most diverse effects may result in different individuals, though in all, whatever the perturbation in the normal process of repair may have been present, the cause has been the same—poisoning by micro-organisms.

I will take the liberty of citing, as well as illustrating, the most grave consequences of poisoning by micro-organisms following operations upon veins. In the case of operation for cure of an arterio-venous aneurism which was reported to this Society, April 26, 1881, by Dr. E. L. Keyes (*Virginia Med. Monthly*, December, 1881), the patient was described as having been anæmic, and possessed of a low degree of vitality. The operation, at Bellevue Hospital, was difficult and prolonged; at its close, there was a ligature upon the perineal, upon the posterior tibial, and upon the popliteal, and upon one other vein, while the aperture of the anterior tibial vein was occluded by a sponge saturated with a solution of subsulphate of iron. The patient rallied slowly from the ether. The wound did not granulate, but assumed first a dry pink, then a moist gray appearance, with some colored serum

shortly before death. Forty-two hours after the operation there was a slight chill, followed by a condition of torpor, physical depression without delirium, terminating in death sixteen hours later. Just before death, the temperature was found to be 105.25° F.

What was the source of the poison that so speedily overwhelmed this patient, and prevented even local reparative effort? No microscopical examination of the tissue of the wound site in this case are recorded; but observations of similar cases by other observers (Ogston, *loc. cit.*, and also *Journal of Anatomy and Physiology*, vol. xvii. p. 49) and experiments upon animals have demonstrated that in such cases the wound tissues are infiltrated by enormous and appalling growths of micrococci. The poisonous ichor or ptomaine, the chemical resultant of the decomposition induced by the proliferating micro-organisms, is produced in quantities measured only by the activity of the growths of the micro-organisms, and is absorbed rapidly into the blood, and in such amount that but a few hours are needed for such a degree of blood-poisoning to be effected that death is the result.

The case in question is seen to have had in an unusual degree all the conditions needful for the development of the greatest activity of invading micro-organisms—general resisting power at a low ebb, local tissue resisting power undermined by previous disease, traumatism great and prolonged, a hospital atmosphere likely to contain active germs. It is obvious that in other cases in which less favoring conditions exist, every gradation, both of the local and general toxic manifestation may be produced, so that in slight irritation and transient fever, in phlegmonous inflammations, early bounded by the formation of a wall of granulation tissue, in diffuse inflammation with spreading gangrene and advancing venous thrombosis, as well as in the instance in which profound and rapid general intoxication is produced with but slight local symptoms, we have an expression of the result of the same disturbing agent. While it is true that the development of these effects does not necessarily depend upon the presence of veins in the wounds thus attacked, yet a frequent connection between veins and the more severe grades of this tissue poisoning, poisoning results from the readiness with which the connective tissue which ensheathes the veins permits the progressive invasion of micro-organisms, and from the fact that the resulting periphlebitis determines the formation of coagula in the involved vein, which, in their turn, are likely to be speedily invaded by micro-organisms and become converted into poison dépôts from which ptomaines, pus, and emboli are discharged directly into the circulation.

The question whether the application of a ligature to a vein is in itself the source of any additional hazard in any given case becomes perceptible of a more definite answer in the light of the more definite knowledge to which we have attained as to the pathology of the disturbances which complicate wounds. It has been seen to how different a conclusion a simple appeal to experience has led different observers; these conclusions varying from the extreme presented by Gross, that "the danger of ligating veins is in great degree, if not entirely, unfounded;" to that presented by Chassaignac, that "ligation is one of the most dangerous operations of surgery." A more satisfactory result will be reached by an analysis of the particular conditions which the presence of a ligature upon a vein introduces into a wound, and by a consideration of the effects of such conditions upon its repair.

The introduction of the antiseptic animal ligature has modified so greatly the conditions which attend a ligature, in those cases in which it is used, that a discussion of the effects of the ligature demands a separate consideration of the simple unprepared thread, and of the antiseptic animal ligature.

The doctrine that the tunics of a vein possess a special intolerance that renders them liable to destructive inflammation more quickly, and upon less irritation than other tissues, has received abundant refutation, and deserves mention simply as a matter of historical interest.

The effects of the mere constriction of the vessel by the ligature does not introduce new dangers into the wound. What these effects are, the use of antiseptic ligatures has enabled us to determine, and their discussion will be in order, more particularly in connection with the consideration of the effects of such ligatures. It is, therefore, among the indirect effects of a ligature that conditions of importance, if there be any, are to be found. These indirect effects are purely those produced by the prolonged sojourn of the ligature in the tissues. Whenever the traditional ligature is applied, the constricting thread is an irritating foreign body in the wound, and invariably excites along its track an inflammation which persists until its removal is permitted by the division, by ulceration, of the walls of the constricted vein, a period of time extending upon an average from one to two weeks, according to the size of the vein. By preventing union by first intention the ligature favors the entrance and development of atmospheric germs during the entire time that it keeps the wound open, and saturated with the secretions of the suppurating sinus which it creates, it becomes the best of mediums for transmitting micro-organisms to the deepest part of the wound. The irritation of its presence puts an additional strain upon the resisting power of the tissues among which it lies, and to this extent lessens their ability to resist the invasion of micro-organisms that may at any time find access to them.

The result of a failure of the tissues to resist such invasion of micro-organisms has already been dwelt upon, and the relation of cause and effect, which they bear to diffuse periphlebitis and to septicæmia shown.

The conditions thus enumerated, which attend the presence of an ordinary ligature, when viewed in the light of present knowledge as to the agencies by which wound disturbances are caused, certainly justify a dread of ligation as a hæmostatic agent in venous hemorrhage, and makes more emphatic the cautions as to its use. That in the great majority of cases the amount of disturbance resulting from the ligature should be limited to a circumscribed inflammation, which simply mats together the tissues adjacent to the ligature, is but another evidence of the extent of the natural resisting power inherent in healthy living tissues. It is in those cases in which defects of resisting power exists, as notably in tissues whose nutrition has been interfered with by the varicosity of their veins, that the full effects of the conditions determined by the ligature would be developed.

But these considerations as to the sources of wound disturbance and their relation to serious complications after vein wounds, show the importance of eliminating them, not only in cases where veins already diseased exist, but also in all cases in which vein wounds demand special means for the control of hemorrhage. The importance of protecting such wounds from further irritation, and from becoming the seat of multiplying micro-organism, makes of great importance the search for a substitute for the ordinary ligature.

The acu-pressure of Simpson and the forci-pressure of Pean, both present great advantages, as methods for controlling venous hemorrhage, over the common ligature, and few conditions will be found in which one or other of them may not be substituted for the ligature. The retention of the compressing needle, or forceps,

is rarely necessary for a longer period than a few hours. Their smooth metallic surfaces do not irritate the wound, and their early withdrawal removes any obstacle to union by first intention that they might possibly have caused during their residence in the wound. In my paper of last year, already referred to, I reported a case in which permanent closure of a lateral wound in the internal jugular vein was accomplished by the application of the hæmostatic forceps and its retention for a little more than twenty-four hours. In most cases, as in wounds of veins in the axilla, or in the neck, in operations in those regions I have been able to remove them in a much shorter time.

In dealing with wounded veins, as acu-pressure needles and hæmostatic forceps excel the ordinary ligatures, so they, in turn, are excelled by the animal ligature and the antiseptic methods by which, with a perfect hæmostatic, easily and universally applicable, that provokes no irritation by its presence in the tissues, and that is spontaneously removed by absorption when no longer needed, security is also guaranteed against the access of micro-organisms that might disturb repair. By the use of the antiseptic animal ligature it becomes possible to avoid the sources of disturbance that have thus far been recognized in wounds involving veins, and thus inflammatory and septicæmic complications almost completely vanish from the phenomena that attend the ligation of veins.

But one possible objection presents itself to the use of an unirritating absorbable thread, viz., that its application may not be sufficient to produce the effusion of the amount of plastic material necessary for securing the permanent adhesion of the vein walls at the point of constriction. Such an objection, however, has not thus far been supported by clinical experience. In connection with this experience, an experimental inquiry into the method by which obliteration of a vein is accomplished without the aid of a thrombus, or of an irritating ligature would be of importance. For the purpose of such a study I made a number of experiments during the past year upon goats; these experiments included three ligations of the internal jugular vein, and two of the femoral vein; I was assisted in them by my friends Drs. Fowler, J. H. Hunt, and J. E. Pilcher. Antiseptic catgut was used as the ligature in each, and the operation was done with antiseptic precautions; union by first intention of the operation wound was secured in each instance. As the result of these operations, I secured specimens illustrating the condition of repair upon the second, fourth, ninth, fourteenth, and twenty-fourth days after ligation. These specimens were prepared for microscopical examination by Dr. Hunt, who made sections of the frozen fresh specimens, which were then stained with hæmotoxylin and eosine, and mounted in damar. In the interpretation of these preparations I have been able to obtain the skilled opinion of Dr. E. O. Shakespeare, of Philadelphia, who finds that in them the tissue cells of the tunica interna are seen to have undergone marked proliferation; the activity of this proliferation being greater as the point where the vein walls are constricted and approximated by the ligature is approached. By the accumulation and confluence of the mass of cells in the cul-de-sac formed by the vein constriction, obliteration of the lumen of the vein is accomplished; this obliteration being perfected and made permanent by the subsequent extension of capillaries into it, and its transformation into connective tissue. Reference to these experiments, together with diagrams illustrating this proliferation of the tunica interna will be found in a report of the lecture of Dr. Shakespeare on inflammation in the bloodvessels, delivered before the College of Physicians of Philadelphia, 1882, and published in THE MEDICAL NEWS, May 20, 1882, p. 539.

In none of these experiments did a thrombus form on either side of the ligature, except in one case, in which, after having applied one ligature, I applied a second one to the swollen vein above, a little more than an inch distant. The part of the vein between the two ligatures having been left filled with blood, I thus obtained a thrombus. This specimen was removed on the ninth day. It seemed to illustrate the conditions of repair in the absence of a clot on the one side of the ligature, and in its presence on the other side. On this latter side, the clot has simply seemed as an unirritating injecting material, by which the vein is distended, and the study of the conditions presented by the vessel is facilitated, without otherwise modifying the character of the reparative process. The clot plays here, as in any other wound in which blood has been effused, and in which it has been protected from the access of destructive micro-organisms, simply the part of an unirritating foreign substance mechanically distending the parts among which it is diffused, until it shall be invaded and appropriated by active cells from the adjacent tissue.

The ligatures still remained unchanged in all the specimens, the chromic gut, which was used in the first two experiments, and the long-kept carbolized gut (three years in carbolized oil), which was used in the last three experiments, not being readily acted upon by the tissues. Though the ligatures were thus made less absorbable, the tissues in which they were embedded showed no irritation from their presence.

A plain conclusion from these considerations as to the character of the process, determined by the application of a ligature to a vein, is that the obliteration of the lumen of the vessel is a secondary effect of reparative changes which have as their first object the restoration of functions in parts whose nutrition has been disturbed by the original application of the ligature. The simple fact that the agent which has disturbed the nutrition of the tunica interna, and provoked a more active metamorphosis and proliferation of its cell elements, has at the same time held the vein walls in coaptation until the confluence of the plastic material from the constricted vein walls has become sufficient in amount and tenacity to permanently unite them together. Essentially, the process is that of the formation of a cicatrix, and in its course the ligature plays the same part as does the suture in ordinary wounds, that of maintaining coaptation of the wounded structures until firm adhesion is secured. We see in this also the same process as that by which a simple lateral slit in the vein wall may be repaired without obstruction to the current of blood through the vessel, the edges of the slit themselves furnishing the material for its repair, the amount of which material, if only further irritation or traumatism be withheld, being strictly limited to the reparative needs of the injured structures.

These conclusions as to the process of repair after ligation of veins with unirritating ligatures find an important practical application in the consideration of the propriety of substituting a lateral ligature, or a lateral suture for ligatures encircling the entire vessel in the treatment of wounds involving but a portion of the side walls of a great vein.

It will be remembered how positive was the condemnation of the lateral ligature expressed both by Prof. S. D. Gross and by Prof. S. W. Gross in the Philadelphia discussion. I find that Malgaigne also (*Médicine Operatoire*, ed. 1881, p. 114) strongly condemns it, saying that "the lateral ligature will be an operation forever to be condemned," and that "for very extensive wounds of venous trunks, where compression is insufficient, the *only* resource is the ordinary ligature." Malgaigne's objection, however, was

founded on the erroneous idea that permanent hæmostasis after a vein wound dependent upon the formation of a clot sufficient to occlude the entire lumen of the wounded vessel, and that, inasmuch as the lateral ligatures in some cases might fail to provoke the formation of such a clot, in such cases where the ligature came away, secondary hemorrhage would be inevitable.

The objection of Prof. Gross is based upon the statistical statement, that of thirteen instances in which the lateral ligature had been applied, four proved fatal from secondary hemorrhage; a source of danger of rare occurrence when a vein is ligated in its continuity. Such a record of disasters, in his opinion, outweighs any advantages that might be supposed to be gained by lateral ligatures, and make its use justifiable.

It is to be borne in mind, however, that this record of disasters is a record of results from the use of the ordinary ligature. Reference to what has already been said as to the conditions which the use of such ligatures introduces into the repair of a wounded vein will be found to give ample explanation of the frequency of secondary hemorrhage after its use as a lateral ligature. The introduction of the antiseptic animal ligature, however, which may be cut short, and over which speedy union by first intention of the wound may be secured, places the subject of lateral ligature upon an entirely different basis. The tissues of the puckered side-wall of the vein, where they are grasped by the ligature, are placed in the same condition as that already described as characterizing veins ligated in their continuity. No thrombosis is required, nor formed by its insufficiency or its disintegration to become a source of danger. There is no ulcerative process to extend unduly and to leave an opening in the vein wall when the ligature comes away. That the process of the formation and complete organization of the plastic material that fills in and effaces the irregularity produced by the application of the ligature should proceed undisturbed to its conclusion, demands simply that the general precautions for securing wound repairs are observed. The ligature acts as an unirritating reinforcement that prevents the rupture of this new tissue during the yielding period of its history, and itself finally is disintegrated and is removed in the ordinary tissue changes of the part. Practised with the antiseptic animal ligature, lateral ligature, therefore, promises to be a justifiable and valuable means of treatment in wounds of the lateral walls of veins.

Lateral suture suggests itself as a resource in long linear wounds of the side walls of large veins. It would be simply a modification of the lateral ligature, and the same considerations would be applicable to it. I believe it to be practicable, and can conceive of conditions in which it would be a resource of great value.

DR. POST remarked concerning the ligation of veins in stumps after amputation, that he had been accustomed to do so without hesitation, and had not known any injurious consequences to follow. He had had one case in which he tied the primitive carotid artery for a large teleangiectasis involving one side of the face. The patient died with symptoms of pyæmia; although the jugular vein was not exposed, there was found at the autopsy thrombosis of that vessel and embolic inflammation of the lung. The vein also contained a phlebolite.

He had also met with one fatal case of phlebitis following the use of pins in the treatment of varicose veins of the thigh.

DR. GERSTER had applied the lateral ligature to the internal jugular vein in a case of multiple lymphoma of the neck. A row of catgut ligatures were applied to a longitudinal slit, and primary union followed the operation. He had also ligated the internal jugular vein in the course of exsection of tumors of the neck in four instances, in some of these cases he applied simply a double ligature. In two instances, however, he was obliged to exsect considerable portions of the vessel, and in one case, death followed exsection very shortly. The case was one of those where it is impossible to determine whether death was caused by incipient acute septicæmia or shock. A post-mortem was made, but it did not reveal any positive evidence as to the cause of death. The central portion of the vein did not show any septic changes which could serve to explain the termination of the case.

In one case he had exsected a very large venous plexus, situated near the scroto-femoral fold, mainly on the inner surface of the thigh in a powerful young baker, who was prevented from attending to his daily business on account of the severe pain which the growth produced. It was a convolution of varicose veins, some of them very large, covering an area of about ten square inches. In that case he removed the entire mass, and proceeded as in the exsection of a very vascular tumor, applying double ligatures, about sixty in number, and cutting the vessels between them. Some of the branches of the vessels penetrated through the fascia into the muscular structure, and were removed with portions of connective tissue and of muscle *en masse*. Union by first intention occurred in this case, and no further trouble was experienced. The chrominized catgut ligature was employed.

DR. LANGE referred to a case already reported to the Society, in which he applied the lateral ligature to the internal jugular vein, accidentally opened in the attempt to tie the common carotid artery for secondary hemorrhage. In that instance air entered the vein. The ligature used was antiseptic silk, and recovery took place, and he subsequently presented the patient to the Society.

VESICAL CALCULUS WITH A PIECE OF SILVER WIRE FOR A NUCLEUS.

DR. J. C. HUTCHISON presented a vesical calculus which he removed from a boy fifteen years of age, upon whom he operated ten years ago for stone in the bladder. The first operation was that of median lithotomy, in which he wounded the rectum, and a rectal fistula followed, and continued up to the time of the second operation. He made several attempts to close the fistula, twice by inserting silver wire sutures, two or three times by touching the margins of the fistulous opening with nitric acid, but in all instances unsuccessfully. The last attempt to close the fistula by sutures was about a year and a half ago. The case was left under the charge of the house surgeon, who was requested to remove the sutures at a certain time, and he did so. The boy, however, was never comfortable after the operation, but always complained more or less of pain in the bladder. The urine continued to pass through the rectum, but the opening was very small. On the first of February last, Dr. Hutchison examined the bladder very carefully with the sound, symptoms of stone having presented themselves, and detected a calculus. On the following day he performed the medio-bilateral operation, and found the stone adherent to the posterior part of the bladder so firmly that he was unable to detach it with his finger, but by taking a piece of flexible wire and making a loop he was able to remove it. On examining it he found the nucleus was a piece of silver wire.

The interesting features in the case were, first, the wound of the rectum, not a common accident in lithotomy. Second, the difficulty in closing the fistula. Third, the accident of dropping a suture into the bladder, which formed the nucleus of the calculus. Fourth, the difficulty of detaching the stone from the

wall of the bladder at the time of the operation. After the last operation the perineal wound was kept open for twelve days, and the edges of the fistula were again touched with nitric acid. The wound was kept open by introducing a catheter through it, allowing the tip of the instrument to remain just in the neck of the bladder, pushing it forward occasionally to withdraw the urine. This was done with the hope that the fistula might close, and he was of the opinion that union had taken place.

DR. POST mentioned that Dr. Kearny Rogers, operated a large number of times for vesical calculus, and frequently wounded the rectum, but no bad results followed in any of his cases.

DR. BRIDDON remarked that wounding the rectum was not so infrequent as was generally supposed, it had occurred once to him in eighteen lithotomies.

The PRESIDENT remarked that wounding of the rectum with the median operation was quite unusual. He had operated by the median operation some thirty-four or thirty-six times, and had never had an accident of that kind

DR. HUTCHISON remarked that this was the only case in which he had performed the median operation.

OSTEO-SARCOMA OF THE THIGH.

DR. POST remarked that an interesting feature in the case which he reported at the last meeting was that a week after the operation there was an active pulsation in the femoral artery from the groin downwards to the point where the vessel bifurcates. Below that point, the patient's limb being very thin, he was able to trace the vessel distinctly as a hard cord, nearly as large as the little finger, and evidently filled with a coagulum.

RHODE ISLAND MEDICAL SOCIETY.

Quarterly Meeting, March 13, 1883.

(Specially reported for THE MEDICAL NEWS.)

THE Society met in Lyceum Hall, Providence, March 15th, the PRESIDENT, DR. JOB KENYON, in the chair.

The SECRETARY, DR. G. D. HERSEY, read the records of the December meeting, which were approved.

The Chair appointed Drs. Anthony, Saunders, and White, a committee to nominate

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION,

and upon the recommendation of this committee, the following gentlemen were elected delegates:

Drs. Job Kenyon, O. C. Wiggin, H. G. Miller, C. W. Parsons, C. B. Mathewson, Geo. H. Kenyon, G. D. Hersey, W. E. Anthony, A. A. Saunders, F. H. Rankin, S. W. Francis, D. H. Batchelder, G. W. Stanley, S. Hunt, H. G. Pomroy, S. B. Church, W. J. Burge, W. S. Bowen.

The President and Secretary were empowered to fill any vacancies that might occur.

DR. G. TABOR SWARTS read a paper giving the results of his investigations of the recent

EPIDEMIC OF TYPHOID FEVER IN PROVIDENCE.

He stated that out of five hundred reported cases he had thus far investigated two hundred, and proposed bringing up the subject again at a subsequent writing. Regarding the two hundred cases looked into, he observed as follows: A few cases were reported in September, 1882, a larger number through October, and the greatest number late in October, and the early part of November—Nov. 1st nineteen cases were reported in a single day. Of the two hundred patients, the occupations were these: sixty-two were scholars or teachers; eighty-five were in sedentary or indoor work; twenty-seven were in pursuits necessitating a constant change of temperature; nine were engaged entirely out of doors; seventeen not ascertained.

Sex.	Color.	Age.
111 males.	195 white.	1 to 5 years—15 cases.
89 females.	5 colored.	6 " 10 " —32 "
		11 " 20 " —81 "
		21 " 30 " —44 "
		31 " 40 " —17 "
		41 " 50 " — 6 "
		51 " 60 " — 5 "

In seeking for possible local causes of the disease, he had noted the following: In twenty-three instances the cellars were damp; in many localities garbage was found; in twenty-five per cent. of the cases *well* water alone was used by the family for drinking and cooking; and in five per cent. tank or cistern water. In many instances it was suspected that the domestics were in the habit of using water from the *hot* water faucets for culinary purposes, which may be dangerous if the plumbing of the *tank* that supplies the hot-water reservoir is defective. In seventy-nine houses iron sinks, having an unwholesome odor, were found, there being a lack of proper trapping. Nothing suspicious was found relative to the milk and ice used in the families. On the whole, fair sanitary conditions were found in thirty-two per cent. of the cases, and unsanitary in sixty-eight per cent. In seven instances the contents of privy-vaults had overflowed upon the ground, and sewage was found upon the ground in thirty-five cases; swill was decaying on the ground or in privy-vaults in thirty-two cases; nine over-crowded neighborhoods were found; there were ten cases noted where the sickness had occurred in bedrooms in close proximity to privy-vaults. In many schoolhouses improperly trapped sinks were found. It was found also that in fifty per cent. of the cases the use of disinfectants during and after the illness had been wholly neglected.

Dr. Swarts then, by the aid of blackboard diagrams, explained several of the defects most frequently found in the plumbing of houses.

DR. H. G. MILLER reported the following cases:

MALINGERING.

A man who was a soldier in the late war, soliciting a pension, came to Dr. M's office, saying he was totally blind in one eye and that the vision was impaired in the other eye. Upon external examination the eyes seemed sensitive and irritated, without obvious cause. The ophthalmoscope revealed no abnormality in either eye, and the stereoscopic tests employed proved conclusively that vision was perfect in both eyes. The man was accompanied by his wife, and the case was the more noticeable from the apparent respectability of the parties. They both asserted that the man, in addition to his loss of vision, suffered from a foul, bloody, purulent discharge from one of his ears, which discharge, however, was not present at the time of their visit, as it disappeared occasionally. Upon examination, no perforation of the drum membrane, or any other lesion was found.

TUMORS OF THE ORBIT.

A woman, 50 years old, fell, striking on her forehead. Some months later a slight protrusion of the right eyeball, directly forward, was noticed, but there was no pain or impairment of vision. Two years later a swelling appeared just below the eyebrow at the inner angle of the orbit, accompanied by pain and defective sight, but as vision in the other eye was impaired, an operation was greatly dreaded. It was decided on finally, and an incision made parallel with the eyebrow. A tumor the size of a filbert was easily removed, but

the protrusion of the eyeball was not diminished. Further examination revealed another growth occupying the innermost part of the socket. The eyeball was then enucleated and the new growth excised, it being nearly double the size of the one first removed. The operation was followed by very severe cellulitis of the orbit. The tumors were not connected with the wall of the orbit or with the lachrymal gland, and it was hoped they would prove to be simple fibrous growths, and non-malignant. They had not as yet been examined microscopically.

IMPAIRMENT OF THE RETINA

at the macula lutea from looking at the sun with the naked eye. A commercial traveller, 25 years old, who rather prided himself on his strong eyes, attempted to observe the recent transit of Venus without a shaded glass. After looking at the sun nearly five minutes without special discomfort, he noticed his sight became blurred. This continued for a week before he sought treatment. When first examined his vision was about one-fifth. The macula presented a whitish appearance, as though coagulation had taken place there. He has gradually recovered his vision, which is now nine-tenths, and the whitish appearance at the macula has changed to a reddish one.

ELECTION OF A FELLOW.

Upon the recommendation of the Board of Censors, Dr. J. A. B. Tanquay, of Providence, was elected to Fellowship.

DR. S. S. KEENE read a paper upon

PNEUMONIA.

In regard to treatment, the writer denounced in severe terms the old system of venesection and other methods of depletion, claiming that science has demonstrated that an excess of fibrine in the blood is always present in this disease, and that *bleeding increases* the amount of fibrine by four hundred per cent; that the volume of blood is replaced in twenty-four hours from the lymphatics; that the crisis is not hastened; and that the danger is greatly increased of purulent infiltration from excess of white-blood corpuscles. The free use of antimony was also deprecated.

DR. H. BATCHELDER advocated a return to the old methods of treatment. He was surprised that any practitioner could denounce bleeding as dangerous. He himself had just been called to see a robust man in the first stage of pneumonia. He found him in a critical condition, lips purple, etc. He bled him freely, with a marked improvement in all respects. In his own practice, extending back forty-four years, he found, by his notes, he had treated in all 487 cases of acute pneumonia, in 376 of which he had performed venesection; of those bled only 2 died, while 7 of those not bled died. He believed also in the use of antimony, giving it until its specific effects were obtained. Its use requires caution, but rightly handled it is a sovereign remedy.

D. E. M. SNOW read a paper on the

EARLY HISTORY OF VACCINATION.

The first experiments of Dr. Jenner were described, the writer praising the prudence and wisdom shown by him in forseeing objections to his system, and preparing to meet them. The criticism and ridicule to which Jenner was subjected were alluded to, and an old engraving shown, in which was represented Jenner himself in the act of vaccinating a woman, while around him were men, women, and children, from whose heads, arms, and legs the heads of horses, and other members of horned creatures, had grown out—the result of inoculation with *bovine* virus. The first vaccinations performed in this country were by Dr. Benjamin Waterhouse, in Cambridge, Mass., in the year 1800, and probably in July. His own children were the first subjects, and in the month of August five of them were inoculated with smallpox virus, with no effect.

Dr. Artemus Stebbins, who lived with Dr. Waterhouse, made a business of vaccinating throughout the States of Massachusetts and Rhode Island, and to a certain extent in New Hampshire and Vermont. He used a large complicated apparatus for vaccinating, made of silver, at a cost of $40. This man Stebbins vaccinated in all 138,000 persons.

In the year 1810, Dr. Sylvanus Fanshers was employed to vaccinate the people of Providence, by a contract ratified in Town Meeting. He vaccinated here that year 4,305 persons, being paid about five cents for each one.

In 1816–17, Dr. John McKee vaccinated a total of 1,017 persons in Providence, among whom only one case of *bad arm* was reported. In 1856, the City Council of Providence adopted the plan of having free public vaccination performed at the office of the Superintendent of Health. Since then, Dr. Snow said he had vaccinated, in his capacity of Superintendent of Health, 28,365 persons, an average number annually of 1,091, the largest number in one year having been 2,798, in 1872. During this period he had issued 34,435 certificates of vaccination to school children.

DR. E. A. KEMP, of Lonsdale, reported a case of

MALIGNANT ULCERATIVE SORE THROAT,

first quoting from the work of Dr. J. Solis Cohen, on throat diseases, to show the rarity of such cases.

Dr. Kemp's patient, S. F., aged 22 years, married, of good family history, and a mill operative, came under treatment October 5, 1882, he having had a slightly sore throat for four weeks previous, but feeling able to work up to within three days of the date mentioned. On examination, both tonsils were found enlarged; and on the left one was a circumscribed phagedenic ulcer, about three-fourths inch in diameter; the mouth was opened with great difficulty; the face and eyelids were swollen, the eyes were glassy, and there was fever of a low type; there was dysphagia; the tongue was but little coated; the tonsils and gums were of a deep red color; the uvula and pharynx were œdematous; the ulcer presented a deep ash color; there was fetor of the breath.

The disease soon assumed a typhoid type. The voice was weak and muffled. On the eighth day of the disease the patient seemed better and was about the house. On the tenth day was worse; pulse 120; temperature 103½°; but still up and dressed. On the thirteenth and fourteenth days no particular change noted—keeps about the house, with pulse 140, and temperature 104½°. On the sixteenth and seventeenth days, pulse less rapid and patient seemed stronger. Eighteenth day, pulse 132; patient growing weak, but taking plenty of nourishment. Twentieth day, rather less œdema about the tonsils, small ulcerated spots appeared on the tongue; brandy, whiskey, sherry, and milk were given very freely. Ulcers appeared on the head and arms on the twenty-second day, and the patient died from exhaustion on the twenty-third day. A supporting treatment was maintained throughout. Locally, an attempt was made to pencil the surface of the ulcer with strong hydrochloric acid, but it caused so much pain it was discontinued. The mouth and throat were freely rinsed with liq. sodæ chlorinatæ.

DELIVERY IN THE ERECT POSITION.

DR. W. J. BURGE said he was recently called to a confinement case, and found the child had been born

nearly an hour. Delivery occurred suddenly while the mother was on her feet in a stooping posture, the child dropping to the floor. Those present simply wrapped it in a blanket and left it undisturbed. On examination the doctor found the child alive and the funis separated about five inches from the umbilicus. No hemorrhage had occurred and the child's condition was good.

DR. JOB KENYON mentioned a case where the woman was delivered while standing, and the cord was torn apart about five inches from the navel. No hemorrhage occurred and the child lived.

DR. GREELY said he knew of an instance of the cord being torn off *at* the *umbilicus* without injury to the child. Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 15, 1883.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

THE subject of the paper of the evening was read by DR. F. R. STURGIS, and was entitled,

THE REPRESSION AND REGULATION OF PROSTITUTION.

The paper, the author said, was prepared at the special request of the President, it being one of the avowed objects of the Academy to promote the public health.

Three points were laid down for consideration:

First, the causes of prostitution.

Second, the necessity for regulation.

Third, the results obtained by legislative action.

Under the head of causes were enumerated, *first*, the man, as being the prime agent; this point was agreed upon by all writers on the subject in England, France, and America; *second*, the love of dress; *third*, the absence of proper home influences, which includes a *fourth* cause—the indiscriminate herding in tenement houses; *fifth*, the increase of luxury and civilization, thereby producing increased means for tempting women.

The arguments advanced in favor of regulating the evil were, *first*, the increase of syphilis. This disease was becoming more and more widely prevalent, particularly among the better classes. The number of young women, or those who came fresh upon the town, having contracted syphilis, were notably increased in our city hospitals. *Second*, the number of women in New York City, based on an estimate furnished by Sanger's statistics, was placed at 6,000, but this number probably represents only the known women, the clandestine class being found in the proportion of nearly six to one. Dr. Sturgis thought that Sanger's figures were too high. Depses' statistics probably came nearer the truth, being in the proportion of known women, 1 in every 601; clandestine, 1 in 104, of the population. Estimating the population at 1,000,000, this would give a total of over 11,000, while Sanger's statistics would make the number 42,600.

The effects of legislation in various countries went to show that, although it is impossible to suppress the evil, it is possible to keep it within bounds, and whenever women are found diseased, to insist on proper treatment. In this country, at least, one good point could be made, viz., that of insisting upon all persons found diseased by the police, or who voluntarily commit themselves at the charity hospital, to be retained there until cured, or until the surgeon considers them beyond the contagious period.

The paper was discussed by Hon. Judge Brady, Drs. Webber, R. W. Taylor, and Sturgis.

CORRESPONDENCE.

MR. SPENCER WELLS' OVARIOTOMY STATISTICS.

To the Editor of THE MEDICAL NEWS:

DEAR SIR: I have just received from Mr. T. Spencer Wells the subjoined communication, which I send to you at once in the hope that you will be able to give it an early insertion in THE MEDICAL NEWS as well as in the *American Journal of the Medical Sciences*. If your readers will refer to THE NEWS, of January 27th, they will find that the statistics of Mr. Wells' cases were furnished me by Mr. Thornton, and not compiled by me. They were originally intended for the new edition of my *Surgery*, but having reached me too late for insertion in that work, I obtained permission from Mr. Thornton to publish them in THE NEWS, where they appeared without one syllable or letter of alteration. In reading Mr. Wells' opening sentence, it might be inferred that I was the author of the statistics. It would have been well if the celebrated ovariotomist had said that the *statement* to which he therein refers had been based upon Mr. Thornton's statistics, as that would have rendered the matter perfectly clear as far as it concerns me. Mr. Thornton's statistics dealt only in generalities, and not in any details respecting the gradually diminishing mortality of Mr. Wells' successive series of one hundred cases. In doing this the distinguished ovariotomist had, I am sure, no intention of misrepresenting his friend Mr. Wells, for whom he has always cherished the warmest regard and highest esteem. It may gratify Mr. Wells, as it certainly does me, to know that the new edition of my *Surgery* contains an accurate account of his statistics derived from his own recent work on ovariotomy.

I have the honor to be

Your obedient servant,

S. D. GROSS.

PHILADELPHIA, March 17, 1883.

3 UPPER GROSVENOR STREET, LONDON,
February 27, 1883.

MY DEAR PROF. GROSS: You have published in the Philadelphia MEDICAL NEWS a statement comparing the results of my operations of ovariotomy in 1088 cases with those of three other operators in 381, 328, and 226 cases respectively, making a total of 935 cases. The mortality of my cases is given correctly at 22.15 per cent.; and that of the other operators as 10.76, 10.67, and 11.94 per cent. On this plain statement, as you have published it, any one would conclude that I am a less successful operator than my juniors. Indeed, the author of a very eulogistic review of my last book in the *American Journal of Medical Sciences*, of January, 1883, misled by a false statement in the *American Journal of Obstetrics* (vol. xv. page 547), that I "had gone on for twenty years operating on hundreds of cases with a mortality of 25 per cent.," takes the trouble to give what he believes to be a true explanation of the "high range of mortality in his [my] ovariotomies." He says that I had labored for an "ideal success;" but "his [my] own practice fell short of this ideal." If it were true that after twenty years' operating, I had gone on operating with a mortality of 25 per cent., while others did not exceed 10 or 12, some such explanations as those proffered by my able and kindly reviewer might serve as my excuse. But it is not true. When I had been operating for twenty years, I had reduced my mortality to 11.62 per cent. The results of successive series of 100 cases had been made known, from 34 in the first, and 28 in the second, to 17 in the ninth, and 11 in the tenth series of 100 cases. My cases of 1879, 1880, and 1881 had been published, with results of 11.62, 9.57,

and 10.7 per cent.; and in the preface to my book, published in May, 1882, I afford proof that, "notwithstanding the fact of my being often called upon to treat patients rejected by other surgeons as unfavorable cases, the progressive diminution of the mortality still continues." I added, "It is still more gratifying to be able to add that this increasing success is not confined to myself nor to British surgeons, but is also established in Germany, France, and Italy." There really can be no excuse for this attempt to discredit me with a high mortality after twenty years' experience, as in my book (pp. 214, 215) I had shown very plainly how in successive periods of five years the mortality progressively diminished, and that in the

First five years,	about 1 in 3	died.
Second and third five years,	" 1 in 4	"
Fourth five years,	" 1 in 5	"
Last two years,	" 1 in 10	"

Or, putting it in another form, that in the

First five years,	70 per cent.	recovered.
Second five years,	74 "	"
Third five years,	73 "	"
Fourth five years,	80 "	"
Two last years,	90 "	"

I trust, my dear Professor, that you will accept my desire to stand well with my American brethren as a sufficient excuse for this long letter. And with sincere respect, I am, etc.,

T. SPENCER WELLS.

NEWS ITEMS.

CANADA.

(From our Special Correspondent.)

DOCTORS IN CANADIAN LEGISLATURES.—In the Dominion and Provincial Houses at present in session, there are sixty members of the profession—a representation of about two per cent. Half of these are in the Dominion Parliament, seven in the Senate, and twenty-three in the House of Commons. Eight are graduates of English Universities, twelve of American, and the remainder of Canadian. Of the American colleges, Harvard is represented by six, University of Pennsylvania by three, University of New York by two, and Rush by one. Nearly all of these are members from constituencies of the maritime provinces.

ANATOMY ACT.—The government of the Province of Quebec has brought in important amendments which may do away with the practice of body-snatching, so common here. Two inspectors are to be appointed, with sub-inspectors in each judicial district, who are to see that all unclaimed bodies in institutions receiving government aid are handed over to the schools. The institutions are to notify the inspectors within twenty-four hours of the death of friendless individuals. Claimants must show relationship within the third degree. Schools and colleges are to pay ten dollars apiece for the bodies, the fee to go to the inspectors, and to cover cost of removal, etc.

PROFESSOR CROFT.—The death is announced of this well-known Canadian chemist, who for thirty-five years occupied the chair of Chemistry in University College, Toronto. During this long period he was the leading expert in all cases of poisoning. He was superannuated two years ago, and has since been living in Texas, where he died on the 28th ult., aged 64.

LONDON.

(From our Special Correspondent.)

THE STUDENTS' MEDICAL ASSOCIATIONS are carried on in connection with the individual medical schools. Each school of any size and standing has its own medical society, managed by the students. In some, the teachers take no part whatever; in others, they act as presidents, or even share more largely in the management. The societies are primarily for the purpose of holding meetings once a week or alternate weeks, for the discussion of scientific topics, and exhibition of objects of interest; and in connection with some of them are a reading-room, library, microscopes, osteological and other preparations. The subscription is small, and nearly all students join. Perhaps the most famous of all is the Abernethian Society, of St. Bartholomew's Hospital, in which the staff of the hospital take a great interest. An account of a recent meeting of the Middlesex Hospital Medical Society, of which Dr. Douglas Powell is president, may interest or show what a good work such meetings do. Dr. Powell was unavoidably absent from this meeting, and one of the senior students took the chair. The proceedings throughout were most orderly. From the minutes of the last meeting, it appeared that then a paper on chorea, with special reference to its pathology—the writer, a student, contending that the disease was a rheumatic affection of the neuroglia.

Then Mr. Sutton, one of the demonstrators of anatomy, was called upon to show some specimens. These were—1. A large encephalocele projecting through the occipital bone, and containing the cerebellum; it was covered with healthy skin; there was no hydrocephalus. 2. A single kidney in a fœtus in which there was no trace of the left organ, or of its artery, vein, or duct; but the suprarenal capsule and testicle of the same side were entire. 3. A specimen of congenital obliteration of the middle of the third part of the duodenum, with great dilatation of the stomach above—and this, although the child had only lived a few moments. 4. An ovary and Fallopian tube which had been removed from the inguinal canal of a young woman who had no vagina or uterus. Between the ovary and duct were two tiny cysts of the organ of Rosenmüller. 5. A cancerous tongue in which one lingual nerve was traced passing into a mass of cancerous infiltration; the patient suffered severe pain during life. 6. Nerves from two stumps showing bulbous enlargement of their ends. 7. A gall-stone surrounded by a thick false membrane, and lodged in a small depression in the upper surface of the liver. 8. A specimen of anteflexion of the uterus of a water deer. 9. And a specimen of anteflexion of the uterus of a baboon in which there was great atrophy of the concavity of the bend; this specimen would have greatly interested Dr. Graily Hewitt and his disciples. 10. A ruptured vagina from a hyena: this was produced during parturition, and three young hyenas were found in the peritoneal cavity. 11. Necrosis of lower jaw from monkey. 12. White patch on heart of a bird. 13. A remarkable parasitic disease in an African carnivorous animal. These specimens were not only described and inspected, but with regard to most of them Mr. Sutton added anatomical and pathological remarks of interest and oftentimes novelty. I think your readers will agree with me that such an evening's work is not unworthy of any medical society. Afterwards a few of the students spoke, referring to similar cases, or asking apposite questions, and one of the assistant surgeons of the hospital, who happened to be present, made remarks on several of the specimens. Another member of the Society exhibited several microscopical sections of amphioscus, human retina, etc., and then the meeting was closed with refreshments in the form of tea and coffee. It is impossible to doubt that such meetings must exert a very powerful influence for good upon the students, educating them, and fitting them in many ways for their future position in society.

THE LONDON MEDICAL UNION.—A scheme of quite a different kind has just been started in London. This is a club for medical students of all the schools, which in addition to supplying the ordinary accommodation of a club, holds meetings for scientific discussion; gives musical entertainments, and aims at collecting a scientific and general library. The great difficulty it has to overcome is, that already the better class of students have their time too fully occupied to be able to frequent a club; and hence it is in danger of becoming the resort of the less industrious students. Most teachers have from time to time felt the want of residential colleges for our medical students. At present, with very trifling exceptions, the students live in more or less discomfort in lodging houses; some of the more favored ones finding a home with medical men connected with medical schools. This exposes the men—many of them very young—to great temptations; and is, do doubt, one important cause of the failure of many to steer straight through the rocks and shallows of their student days. At King's College, University College, and St. Bartholomew's Hospital, there is a small residential college in connection with the schools. But the London Hospital, which is situated far in the East of London, is about to make the most important experiment in this direction that has yet been made. Should it succeed, it will be necessary for the other schools to provide similar accommodation, in self-defence; and this would make it difficult, if not impossible for one or two of the smallest schools to hold their own at all.

THE TUBERCLE BACILLUS, AND ITS RELATION WITH PHTHISIS AND TUBERCULOSIS—Some months ago the "Scientific Research Association" requested Mr. Watson Cheyne to investigate this subject, and his report has this week been presented to the council of the Association, and will shortly be published; and I must postpone any further allusion to it until the full text of it is at my disposal. The whole question is of course exciting much interest here, and a very good discussion on it has recently been held at the Medical Society of London.

THE BELLEVUE HOSPITAL MEDICAL COLLEGE.—The twenty-second annual commencement of the Bellevue Hospital Medical College was held in Chickering Hall, New York, on the 14th inst., and the degree of M.D. was conferred on one hundred and sixty-seven candidates by Dr. Isaac Taylor, the President of the Faculty. The valedictory address was delivered by Dr. S. D. Gross, of Philadelphia. He advised the young graduate that the Code of Ethics of the American Medical Association should be his guide; it was "the palladium of his rights, and the ark of his safety; he who dishonored it, dishonored his profession."

THE FRUITS OF THE NEW CODE.—A Louisville correspondent of *The Louisville Medical News*, writes to that journal for the yea and nay vote on the New Code at the late meeting of the New York State Medical Society. He says "It is often necessary to refer our friends and patients going eastward to physicians, and it is important to know those members of the New York State Society who have voluntarily severed their connection with the medical profession of the country, so that we may advise accordingly."

LUZERNE COUNTY (PENNSYLVANIA) MEDICAL SOCIETY.—At a stated meeting of this Society held at Wilkesbarre on the 14th inst., a resolution was unanimously adopted instructing the delegates to the State Medical Society to vote against electing any delegates to the New York State Medical Society Meeting, and to oppose any action tending to recognize that Society in any way whatever.

DR. WILLIAM S. FORBES was tried last week on two indictments. The first was for a violation of sepulture, and the second was for conspiring with certain parties to rob the graves of Lebanon Cemetery. In each case the jury rendered a verdict of "not guilty."

CHOLERA IN CALCUTTA.—During the fourth quarter of the past year Calcutta suffered from an unusual rise in its mortality from cholera. The deaths from this disease in October numbered 91, in November 232, and in December 411, making a total of 734 for the quarter, or 373 in excess of the mean number for the corresponding quarters of the preceding ten years. The first indication of unusual cholera prevalence, was the occurrence towards the end of October in some villages of the suburban section, Chitpore, of a very serious outbreak among the coolies employed among certain jute-presses. Close upon 200 of these were attacked in a few days, and the great majority of them died very rapidly. At this time cholera did not prevail with any severity in either town or suburbs, but subsequently the disease became very general throughout both areas. The incidence of the disease in the town was sporadic. A group of cases seldom occurred in one house or locality, but when this did occur, very unsanitary conditions were found in the vicinity. The disease was of a virulent type, the proportion of deaths to cases being remarkably high. The disease did not present any tendency to ascent until after a heavy rainfall, 6.78 inches, which took place on October 15, but with the cessation of the rains and change in the monsoon it made very decided progress, especially in December. About the middle of that month, however, an abatement began; but the mortality rate at the latest dates February 1, continues higher than the average.

WHAT IS SAID OF THE RECENT ACTION ON THE NEW CODE.—There has been no change of sentiment and no recantation of error on the part of those whom these so-called enlightened reformers, masquerading under the disguise of humanitarians, are so anxious to meet by the bedside of wealthy victims of disease.—*New England Medical Monthly*, March 15, 1883.

MEMPHIS HOSPITAL MEDICAL COLLEGE.—The annual commencement of this institution was held on the 2d inst., and the degree of M.D. was conferred on thirty-two candidates. Prof. B. G. Henning delivered the charge to the graduating class.

MEDICAL COLLEGE OF OHIO.—The Sixty-fourth Annual Commencement of the Medical College of Ohio was held on March 8th, the degree of Doctor of Medicine being conferred on one hundred and two graduates. The valedictory address was delivered by Dr. Thad. A. Reamy.

VACCINATION IN GHENT, BELGIUM.—Smallpox has appeared in Ghent, according to late advices, and a notice has been issued by the city authorities inviting the people to get vaccinated free of cost, and offering a fee of twenty cents to those bringing proof that the operation has been successful.

AMERICAN CHOLERA?—Reports from Mr. Langner, Consular Agent of the United States at Tehuantepec, Mexico, describe the occurrence of a terrible epidemic of choleraic disease, which has prevailed in the States of Tehuantepec, Oaxaca, and Tabasco. It began in the city of Tehuantepec on December 13, increased rapidly during the two weeks which followed, until,

about its acme, one hundred persons died each day. In January the epidemic began to abate, and by the middle of the month had almost, but not entirely, disappeared.

The deaths in the city during the four weeks of the epidemic amounted to fourteen hundred, or nearly to one in ten of the population, the city being said to have fifteen thousand inhabitants. The surrounding villages suffered in like manner from the visitation.

The reports divide the progress of the disease into three periods. During the first the tongue is coated, pulse slightly increased, evacuations fetid, and speedily becoming loose. This primary diarrhœa may continue for two days. During the second period, the evacuations become watery and transparent, cramps are felt in the stomach, with vomiting at first of bilious matter, the ejecta afterwards becoming colorless and transparent. In the third stage, the cramps and other spasms which had already appeared at the end of the second period, became more frequent and vehement; cold perspirations cover the whole body, the extremities become colder, the eyes sunken and surrounded with a bluish areola, the voice reduced to a whisper, the thirst insatiable, pulse weak, complexion cadaverous—the extremities sometimes acquiring a bluish color.

The disease in most cases ran a course of two to three days, but some of the attacks were of extraordinary vehemence, hurrying to the grave in from four to eight hours those who before had enjoyed perfect health. In such cases all the dangerous symptoms were present at the same time.

The remedies used were clysters of linseed infusion and opium, anti-choleraic tincture, dieting, and mustard cataplasms to the epigastrium. An infusion of orange leaves was also used.

Here we have Asiatic cholera in everything but name and derivation, which are very secondary matters, decimating the people of a large section of North America. In a few years, when railroad communication branches southward, such an epidemic will assume a grave aspect to the people of the United States. Owing to the perfection of the health laws of Europe the presence of cholera at Camaran, Jeddah, Mecca, Suez, or elsewhere, on its way from India, is known to us within a few hours after its development and detection, and we become protected by the barriers of enlightened and effective quarantines, which the European authorities interpose. But from cholera on this continent we have no protection. In health legislation we are far behind the age; and the recent action of Congress in failing to respond to the appeal of the profession gives, what seems a serious check, to our progress. But all things come round to those who will but wait, —*and work*. The history of health legislation in all countries shows that, while its course has not run smoothly, the checks which it has encountered have been but temporary in character. So it will prove with us.

TYPHOID FEVER AT LIEGE, BELGIUM.—The State Department has received a report from Mr. Nicholas Fish, our Minister at Brussels, giving an account of a recent epidemic of typhoid fever at Liege. The disease began early in December last, its first victim dying on the 17th of that month. The report extends to February 11 inclusive, during which period 341 persons suffering from the disease were admitted into the civil hospitals. How many were treated in the military hospitals and at their own homes is not stated, but as 182 deaths from the fever were reported during this period, of which only 24 occurred in the civil hospitals, while 144 took place in private houses, and 14 in the military hospitals, we may infer that the total number of cases must have amounted to about 2500.

The greatest mortality appears to have been among males of from 20 to 25 years of age, and among females between the ages of 15 and 20, amounting to 27 of each. Of the 182 deaths, 88, or 48.3 per cent., were among persons between 15 and 25 years of age, while but 21, or 11.5 per cent., occurred among those over 30 years of age. The deaths among females were 101, or 55.5 per cent., and among males 81, or 44.5 per cent. The census of 1880 gave Liege a population of 123,131.

The epidemic was at first light, there having been but 8 deaths to the end of December, and but 1 from January 1 to 10; but during the twenty days from January 11 to 31, there were 110 deaths. From February 1 to 11 there were 73 deaths, and the greatest mortality, 15 deaths, occurred on February 5. From February 7 there was a decrease in the number, the deaths being 5, 4, 2, 3, 1, from the 7th to the 11th respectively.

Mr. Fish calls attention to the fact that Liege is situated in a district which suffered greatly by the floods last summer and autumn; that the winter during which the outbreak took place was exceptionally mild, greatly resembling the ordinary spring weather on the banks of the Ohio, and that the epidemic was preceded by an unusual continuance of rainy weather.

THE VALUE OF VACCINATION.—In the Annual Report of the Medical Officer to the President of the Local Government Board, for the year 1881, the operation and value of the English vaccination laws are demonstrated by an examination of the smallpox deaths occurring in the hospitals and houses of London in 1881, undertaken at the request of Dr. Buchanan, by Dr. H. Stevens. Of the 2379 deaths from smallpox which occurred during the year, children under fifteen years of age numbered 1125, or not quite half the total number; children under ten numbered 953; under five 667. Formerly, in the twenty years before 1871, when public vaccination was gratuitously provided, but when compulsion was little more than nominal, more than half the deaths from smallpox that occurred in London were of children under their fifth year. In the ten years, 1851–'60, these children contributed 59.5 per cent. to the all-age smallpox mortality of the metropolis; and in 1861–'70 they contributed 54.3 per cent.; while in the year 1881 they formed only 27.8 per cent. of the total smallpox mortality. These figures show that it is especially to the advantage of children that vaccination has been made compulsory.

In comparing the mortality of the vaccinated with that of the unvaccinated, the cases of children under ten years are specially studied. In 1881 the population of London, under ten years, was in round numbers divided into 55,000 unvaccinated and 861,000 vaccinated. Among the 55,000 who had not been vaccinated, there occurred 782 deaths; while among the 861,000 who had undergone vaccination, the deaths numbered 125. Upon equal numbers of the two clases, therefore, the mortality from smallpox among the unvaccinated was about a hundredfold the mortality of smallpox among the vaccinated. If the London children under ten years of age who were unvaccinated had had the protection which the current vaccination gives, not 782 of them, but at the outside *nine*, would have died of smallpox during the year; while if the 861,000 vaccinated children had died at the rate of the 55,000 unvaccinated, not 125, but 12,224 deaths would have taken place among them. This saving of life was essentially the effect of vaccination. But the average current vaccination of London is of various sorts; and Dr. Steven's inquiries have touched upon the relative value of public and private vaccinations. The 125 children under ten who died of smallpox, after an alleged vaccination, have to be reduced to 117, by deducting those who on his personal inquiry were

found not to have been vaccinated at all, or to have been "unsuccessfully" vaccinated; and this number 117 divides itself into 82 vaccinated by private practitioners, and 35 by public vaccinators; while the number of vaccinated children under ten is made up of about equal numbers of each class (53 per cent. at the public expense, and 47 per cent. by private practitioners). When the 35 deaths which are reported to have occurred among those publicly vaccinated are examined, 12 of them are found to have been vaccinated only after their exposure to the smallpox infection, when it was too late to prevent them from catching the disease, and too late to modify its virulence. The remaining 23 cases are made up of two cases that could not be traced, and, in about equal numbers of cases where the child was ill of some independent disease when it became affected with what was registered as smallpox (in a few cases it is doubtful whether smallpox was present at all), and of cases where the vaccination marks, although the work of the public vaccinators, were scanty or imperfect. In only one case had vaccination been performed in the manner contemplated by the instructions of the board. This case finds its parallel in those occasional cases where smallpox itself attacks a person, often severely, and yet leaves him liable to death from a second attack of the same disease after a few years' interval.

During the year 12 deaths were registered in London as from "cowpox" and disease occurring after vaccination. Inquiry into the facts of the several deaths showed that the cause of death, with hardly an exception, was erysipelas, derived from one source or another, and seldom even dating from the vaccination. Dr. Buchanan concludes: "Supposing all the 12 deaths had been justly attributed to vaccination, and had been unavoidable results of vaccination, then 12 lives lost by vaccination have paid for the gain of 12,000 children's lives that would, but for vaccination, have been sacrificed to smallpox, not to mention any gain of security after childhood, afforded by vaccination in infancy." The price has not, in truth, been so high as this; but the complete abolition of every such drawback to vaccination is the aim of every one who appreciates the value of the operation.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 10, 1883, indicate that measles and bronchitis have increased, and that erysipelas, intermittent fever, and consumption have decreased in area of prevalence. The reports also indicate that there was a general decrease in sickness.

Including reports by regular observers, and by others, diphtheria was reported present during the week ending March 10, and since, at fourteen places, scarlet fever at nineteen places, and measles at seventeen places. Two cases of smallpox at Detroit March 14.

OBITUARY RECORD.—The weekly *Bulletin de Statistique Municipale*, of Paris, No. 9, March 3, 1883, announced the death of M. Bertillon, Chief of the Bureau of Sanitary Statistics. In 1858 M. Bertillon first raised the important question of infant mortality in Paris, by showing that the department of the Seine and the thirteen departments which surround it furnished 35,000 deaths among children under one year of age, for 173,000 births; while in the rest of France, for an equal number of births, the number of deaths was but 26,000. His labors furnished the most satisfactory arguments in favor of the passage of the law of 1874 for the protection of infant life. His latest work was the reorganization of the service of the City Bureau of Statistics, at the head of which he was placed in 1880. He was sixty-one years of age.

—— On February 23d, in the ninety-third year of his age, PROFESSOR JULES GERMAIN CLOQUET.

Prof. Cloquet was born in Paris in 1790, and obtained his medical education there and at Rouen, his thesis for the *doctorate* being on abdominal hernia. He was elected to the Academy in 1821. Cloquet was a brilliant operator and the author of a large number of valuable papers on surgery and natural history.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 12 TO MARCH 19, 1883.

MURRAY, ROBERT, *Colonel and Assistant Surgeon-General.*—Detailed as member of Army Retiring Board to convene at the call of the president thereof, at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it.—*Par. 2, S. O. 62, A. G. O., March* 16, 1883.

SUMMERS, JOHN E., *Lieutenant-Colonel and Surgeon.*—Detailed as member of Army Retiring Board to convene at the call of the president thereof, at Omaha, Nebraska, for the examination of such officers as may be ordered before it.—*Par. 9, S. O. 62, A. G. O., March* 16, 1883.

BILL, JOSEPH H., *Major and Surgeon.*—Detailed as member of Army Retiring Board to convene at the call of the president thereof, at Omaha, Nebraska, for the examination of such officers as may be ordered before it.—*Par. 9, S. O. 62, A. G. O., March* 16, 1883.

BROWN, HARVEY E., *Major and Surgeon.*—Temporarily assigned to duty at Mount Vernon Barracks, Alabama, during the absence on leave of Captain T. A. Cuningham.—*Par. 2, S. O. 17, Department of the South, March* 6, 1883.

IRWIN, B. J. D., *Major and Surgeon.*—Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, 3d Calvary.—*Par. 1, S. O. 62, A. G. O., March* 6, 1883.

JANEWAY, JOHN H., *Major and Surgeon.*—Detailed as member of Army Retiring Board to convene at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it.—*Par. 2, S. O. 62, A. G. O., March* 16, 1883.

WILLIAMS, J. W., *Major and Surgeon.*—Upon being relieved from duty at Fort Coeur d'Aléne, Idaho, will proceed to Fort Walla Walla, Washington Territory, and report for duty as medical officer of that post.—*Par. 5, S. O. 24, Department of the Columbia, March* 1, 1883.

CUNINGHAM, T. A., *Captain and Surgeon.*—Granted leave of absence for twenty days, to take effect from the 21st instant.—*Par. 1, S. O. 17, Department of the South, March* 6, 1883.

GIRARD, JOSEPH B., *Captain and Assistant Surgeon.*—Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, 3d Calvary.—*Par. 1, S. O. 62, A. G. O., March* 16, 1883.

HEIZMANN, CHARLES L., *Captain and Surgeon.*—To be relieved from duty in the Department of the South, and assigned to duty at Columbus Barracks, Ohio.—*Par. 8, S. O. 58, A. G. O., March* 12, 1883.

TAYLOR, B. D., *Captain and Assistant Surgeon.*—To be relieved from duty at Fort Ringgold, Texas, and will, so soon as able, report to the commanding officer Fort Clark, Texas, for duty.—*Par. 6, S. O. 25, Department of Texas, March* 9, 1883.

WINNE, CHARLES K., *Captain and Assistant Surgeon.*—Granted leave of absence for three months from March 31, 1883, and will be relieved from duty in the Department of the East, and upon the expiration of his leave of absence will report in person to the commanding general Department of California, for assignment to duty.—*S. O. 61, A. G. O., March* 15, 1883.

WOOD, MARSHALL, *Captain and Surgeon.*—Is assigned to duty at Fort Coeur d'Aléne, Idaho.—*Par. 5, S. O. 24, Department of the Columbia, March* 1, 1883.

BRECHEMIN, LOUIS, *First Lieutenant and Assistant Surgeon.*—To proceed to Fort Brady, Michigan, and report to the commanding officer for duty at that post.—*Par. 1, S. O. 41, Department of the South, March* 14, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

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